

DTEC

Smart Vehicle Assistant System with Artificial Intelligence with DtecGPT Capability and Blockchain-Integrated Artificial Intelligence

Executive summary

Dtec Assistant is an intelligent vehicle assistant software with artificial intelligence (AI) that can work on the existing software platform of different classes of vehicles. Thanks to its advanced natural language processing (NLP) model, it enables users to communicate with vehicles as if they were talking to a real person, to control the hardware and applications in the vehicle with voice, and to get information about any subject by chatting thanks to the DtecGPT module. The Dtec assistant is also capable of controlling all IoT (internet of things) devices.

Thanks to its advanced natural language processing capabilities and high-level artificial intelligence features, Dtec can not only understand the driver's voice commands, but also perceive the driver's mood, anticipate their needs and requests, and provide solutions and services in advance thanks to its built-in autonomous learning system and emotional consensus mechanism. Dtec continuously learns and evolves thanks to the data it collects from its users and the artificial intelligence algorithms. In this way, user-specific autonomous learning emotional AI provides advanced assistance for complex real-life problems.

Dtec easily connects to a wide range of IoT-enabled personal devices of the drivers remotely (in their home or office), effectively becoming a single control center with a non-touch interface. This feature saves time and saves users the hassle of adjusting many electronic devices in their daily routine.

Dtec also has a blockchain-based component, which allows for the utilization of cryptocurrency token rewards. It delivers a highly efficient and personalized driving experience by combining real-time data and route optimization insights. Dtec's blockchain integration ensures that data is managed securely and transparently, while providing a decentralized reward system to incentivize user contributions. This integration allows Dtec to manage physical infrastructure with digital technology in a decentralized manner, making it a DePin (Decentralized Physical Infrastructure Networks) project.

Dtec's vision is to build a comprehensive digital ecosystem that aims to capture a significant portion of the automobile market. Its mission is to

- Enable all hardware and IoT devices to be commanded while driving through the Dtec app that is a single voice-operated software platform,
- Create a service that learns the driver's habits and provides solutions and assistance on its own,
- Create a continuous ecosystem by combining continuously developing and learning artificial intelligence service with blockchain technology. This vision supports the goal of creating decentralized infrastructure networks (DePin), enabling Dtec to offer innovative and sustainable solutions in both the digital and physical worlds.

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1. Introduction

The car industry is continuously evolving, driven by technological advancements that offer innovative solutions to enhance the driving experience. Dtec represents a breakthrough in this landscape — a revolutionary virtual assistant app that leverages blockchain, artificial intelligence, and advanced voice processing technologies. By integrating with and enriching the typical driving experience, Dtec offers personalized, time-optimizing assistance for every car owner.

2. Problems in search of solutions

Personal driving assistant apps have become increasingly popular in recent years, offering drivers a range of features to enhance their driving experience. However, despite their usefulness, these apps often fall short in addressing several key pain points and limitations:

- Limited voice recognition capabilities

Problem: Many existing personal driving assistant apps struggle with accurately understanding voice commands issued by drivers. This often leads to frustration and inefficiency, as drivers have to repeat commands or resort to manual interaction with the app, distracting them from the primary task of driving.

Solution: AI algorithms can learn and adapt to individual drivers' voices and speech patterns, accurately understanding voice commands and reducing the need for repeated instructions.

- Lack of anticipation and personalization

Problem: Traditional driving assistant apps typically lack the ability to anticipate the needs and desires of drivers. They provide ordinary recommendations, failing to deliver an experience that caters to the personal preferences of drivers.

Solution: By using advanced data analysis, autonomous learning and emotional consensus mechanisms to calculate factors such as driving patterns, individual preferences, and emotional states, artificial intelligence can deliver highly personalized recommendations tailored to the driver's current mood and provide a more intuitive and satisfying experience.

- Incomplete location intelligence solutions

Problem: While some personal driving assistant apps offer basic navigation features, they often lack comprehensive location intelligence solutions. These apps may not provide accurate information about real-time updates. This leads to inadequate driving experiences and wasted time.

Solution: Integrating blockchain and IoT connectivity and the immediate data they collect into personal driving assistant apps can revolutionize location intelligence. By leveraging real-time data from a variety of sources, these apps can offer more accurate and up-to-date information and provide valuable information on a large number of variables. This enables drivers to travel efficiently and save time. The DePin model ensures that these data are managed securely and transparently, enhancing data security and integrity.

- Limited Integration with IoT devices

Problem: Many personal driving assistant apps lack seamless integration with IoT devices, restricting their ability to control and operate various smart devices within the car. This limitation prevents drivers from fully utilizing the potential of their connected car ecosystem, hindering convenience and efficiency.

Solution: The integration of IoT connectivity allows personal driving assistant apps to seamlessly connect and control a wide range of IoT devices within the car. From adjusting temperature and lighting settings to managing entertainment systems and interacting with home appliances, drivers can enjoy a truly connected and streamlined experience. By leveraging AI and IoT connectivity, these apps can also learn drivers' preferences and automate tasks, further enhancing convenience and efficiency.

3. Key features and benefits of Dtec

3.1 Voice recognition and neuro-linguistic programming

Dtec possesses advanced natural voice processing capabilities, allowing it to accurately understand voice commands issued by the driver. Its extensive vocabulary and advanced speaking capacity makes it capable of providing simultaneous translations in 22 different languages. Additionally, an NLP (neuro-linguistic programming) model was created with a specially developed data set and training algorithm. The training algorithm performs slot filling with intent classification. Thanks to the advanced noise-cancellation module we have developed, only the natural human speaking voice is perceived by Dtec, ignoring any background noise and taking voice recognition to the next level.

3.2 Advanced location intelligence solutions

Dtec leverages GPS data and other resources in the Dtec ecosystem to provide information on real-time traffic updates. By aggregating real-time data from online sources, Dtec delivers accurate and up-to-date location intelligence insights, significantly reducing travel time and enhancing the overall driving experience.

3.3 Seamless IoT device integration

Dtec seamlessly connects to a wide variety of personal IoT devices, enabling drivers to effortlessly control not just their wearable and in-vehicle devices but also manage their home appliances and security systems. Dtec acts as a central hub, streamlining the user experience and providing unparalleled convenience across the driver's day-to-day life.

Leveraging AI and IoT connectivity, an advanced platform like Dtec can deliver a transformative driving experience by providing accurate voice recognition, smart anticipation, comprehensive location intelligence, and better integration with the driver's various devices.

3.4 Emotional intelligence algorithms and learning abilities

Dtec incorporates sophisticated emotional intelligence algorithms, enabling it to understand and analyze the emotions of drivers. By continuously learning the routines, health status, behaviors, tone of voice, appearance, and needs of the driver, Dtec offers a highly personalized service. It enhances the driving experience by providing rational recommendations and useful insights.

4. Technological framework of the Dtec Ecosystem

Dtec Assistant (DtecA) is the software produced for the deployment of Dtec technology and its use in vehicles.

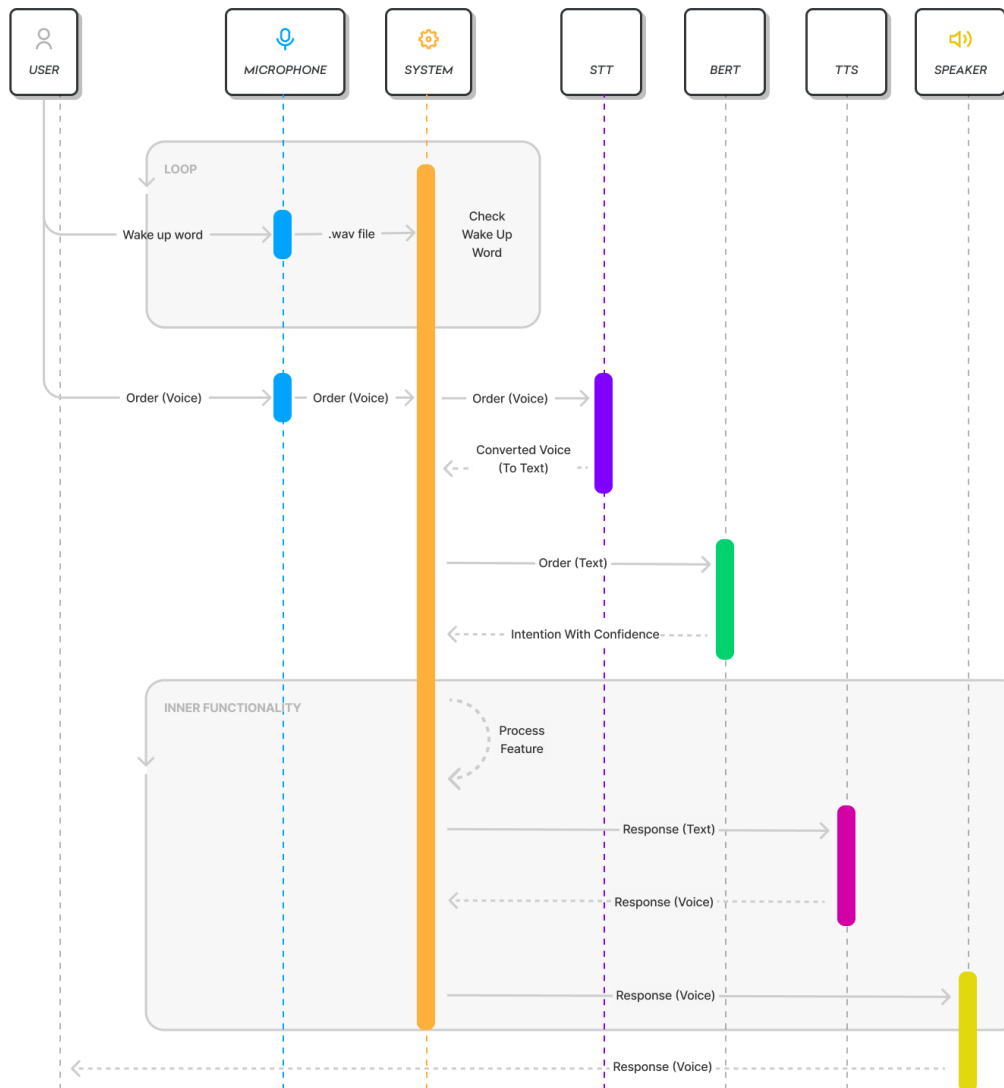
Dtec Brain (DtecB) is the technology behind DtecA, and its artificial intelligence. It learns and evolves using AI data sources and algorithms, and manages DtecA or any other IoT devices that can be controlled with DtecA to provide solutions to complex problems. Some of these data are stored securely and transparently on the blockchain, forming the basis of the DePin model. The DePin model ensures that user data is managed in a decentralized structure, enhancing both security and data integrity.

4.1 Dtec Assistant (DtecA)

DtecA was produced and used extensively in beta testing. It is primarily designed for use in automobiles, but can also be utilized in smart homes, jets, yachts, military vehicles and smart cities. It is an artificial intelligence assistant software that connects to and manages other IoT devices the driver has, which can be located in the vehicle or any other platform.

The NLP (Neuro Linguistic Programming) model was created with a developed dataset and training algorithm. When the user starts talking, the system operates as shown in the diagram:

System Sequence Diagram (SSD)



The system empowers the user to speak with a natural speaking language as if communicating with a person. No specific commands are required in order for the software to understand what is said and transfer it to the relevant points, as well as to answer the questions asked and to provide suggestions by gradually learning the user's behavior.

4.2 Dtec Brain (DtecB)

It is Dtec's artificial intelligence technology (DtecB). It utilizes several sources of data, including voice and visual data from drivers and their surroundings collected by DtecA software, data from IoT devices it communicates with and controls, and other artificial intelligence and blockchain-based projects. DtecB learns and serves these data using unique algorithms, either publicly or only for its own users.

For each individual using DtecA software in their vehicle or at home, DtecB synthesizes data from other autonomous agents and information available on the Internet to provide an overall improvement. In addition, DtecA learns through its built-in receivers the routines, health status, behaviors, voice tone, appearance and needs of the user (which are not shared with the

network) to provide a personalized service and the highest level of assistance possible to the driver.

EXAMPLE:

Let's suppose John uses DtecA in his vehicle. Here's how DtecA collects various data sources to enhance John's driving experience and provide valuable personalized assistance:

- DtecB uses the receivers on dtecA to process and analyze the data. It collects data from John and his environment through sensors in DtecA. This data includes information about road conditions, traffic patterns, and the physical and mental status of the user.
- Dtec communicates with IoT devices within the vehicle, such as the engine management system, GPS, and entertainment system, to gather additional data. It can monitor the vehicle's performance, fuel consumption, and maintenance requirements, ensuring optimal functionality and safety.
- Dtec accesses information from the Internet, including real-time traffic data, news updates, and mapping services. DtecB synthesizes these data with its own AI algorithms, providing John with information about every development on the route.
- As John continues to use DtecA, DtecB that is the autonomously learning artificial intelligence of DtecB learns his routines, preferences, and behaviors. For example, it can change the position of curtains, turn on lights (on compatible devices) when John approaches the house. DtecA also monitors John's health status through wearable devices or health sensors integrated into the vehicle, providing assistance or alerts if needed.

By combining all these data sources and utilizing AI technology, DtecB can offer personalized services to John.

Overall, through the continuous learning and improvement of its AI technology, Dtec aims to create a network of interconnected AI assistants that can provide personalized and comprehensive assistance to users like John, enhancing their driving experience and ensuring their needs are met efficiently.

4.3 DtecGPT

DtecGPT is an AI-based chatbot developed by us. With the DtecGPT module, the user can chat freely with the assistant as if it were a human being.

Trained with DtecB algorithms, DtecGPT builds sentences word-for-word and proceeds by choosing the most likely phrase that should come after each word. DtecGPT has a variety of functions, such as answering questions, solving math equations, writing text, writing poetry, debugging and fixing code, translating between languages, creating text summaries, making suggestions and classifying items.

4.4 Dtec Token

Dtec token is the local payment token of Dtec Ecosystem and runs on Polygon network. Drivers can transfer DTEC token to already saved and configured addresses (previously designated as whitelist) in a whitelist to which the user has given permission beforehand, using a hot wallet like MetaMask. Users can also send Dtec token to other networks outside the

Polygon with the cross-chain feature. These transfers can be initiated via voice commands while driving. The section 6 presents a detailed overview of the Dtec token.

4.5 Dtec NFTs

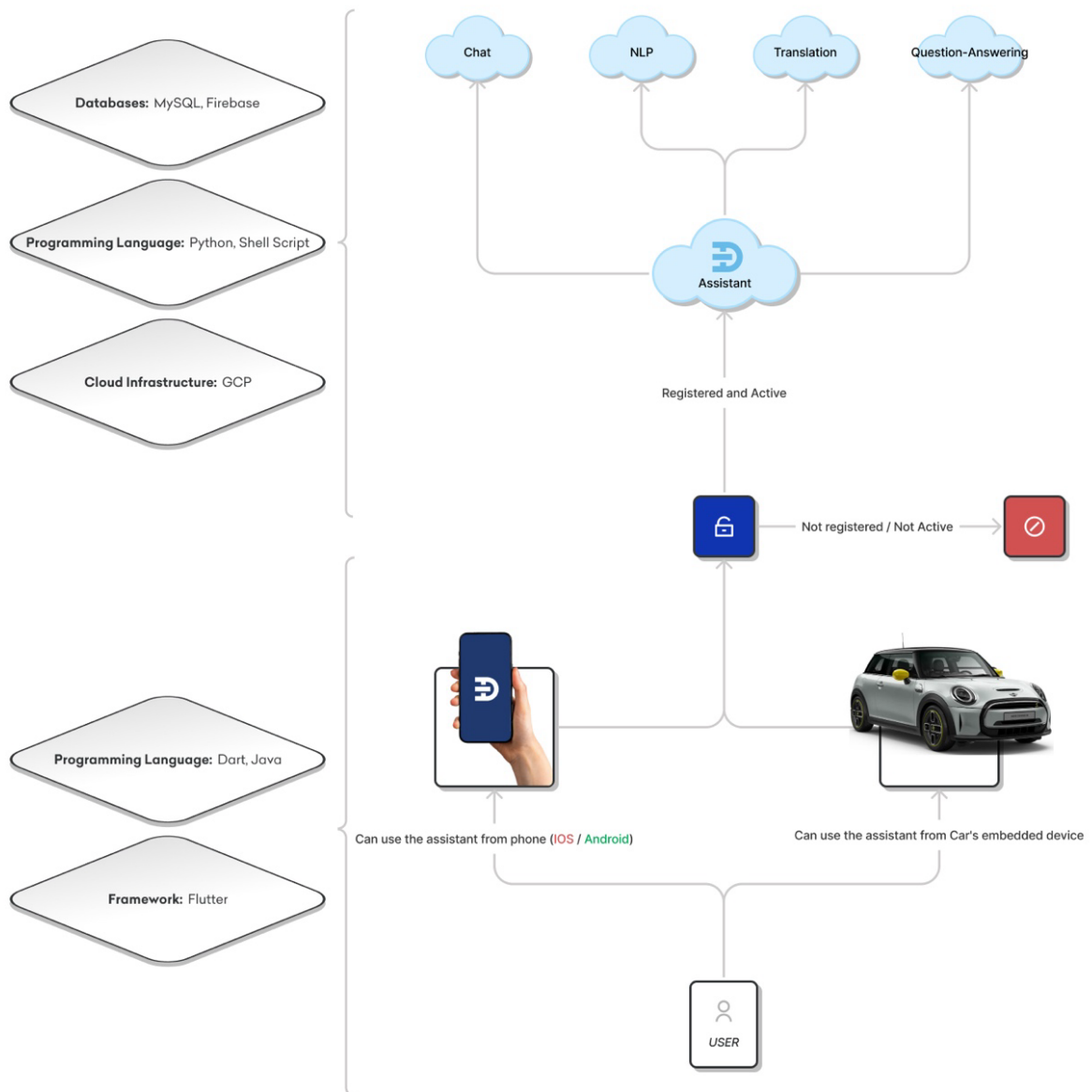
Dtec is planning to release a new series of NFTs that will replace the standard looking 3D hologram assistant currently used in DtecA. The aim is to create a 3D NFT series, giving the user the chance to transform the standard 3D image of DtecA, which the driver can see and talk to in their vehicle, into a customized and unique look. Limited edition collectible NFTs will also be made available to DtecA owners who want to have a unique NFT in their vehicles. As the use of the DtecA software in automobiles increases, the demand for limited edition NFTs will also increase.

Through NFTs, people who do not use DtecA in their vehicles will also be able to benefit from the growth of the Dtec ecosystem by purchasing NFTs.

4.6 Current tech stack

Diagram of the software technologies and programs currently deployed in the Dtec system:

(For an in-depth diagram of the software commands the Dtec system runs and how it works in general, please see Appendix 2: Interactions Diagram)



5. DtecA AI/ML Models

An overview of the modules used in the Dtec system and how they work:

5.1 Speech-to-Text (STT)

Converts speech to text. Detects the human voice and converts what the user says out loud into text.

5.2 Wake Word

The wake words are continuously listened to by the microphone. As soon as the microphone detects the wake word, it will activate the system and transmit the spoken word to other modules. Most other audio assistants currently available must constantly listen to all spoken words until they detect their wake word, which obviously goes against the fair use of personal data. With DtecA, only the wake word will be detected by the microphone, which will then activate the system, thus effectively protecting user privacy.

5.3 Noise Cancellation module

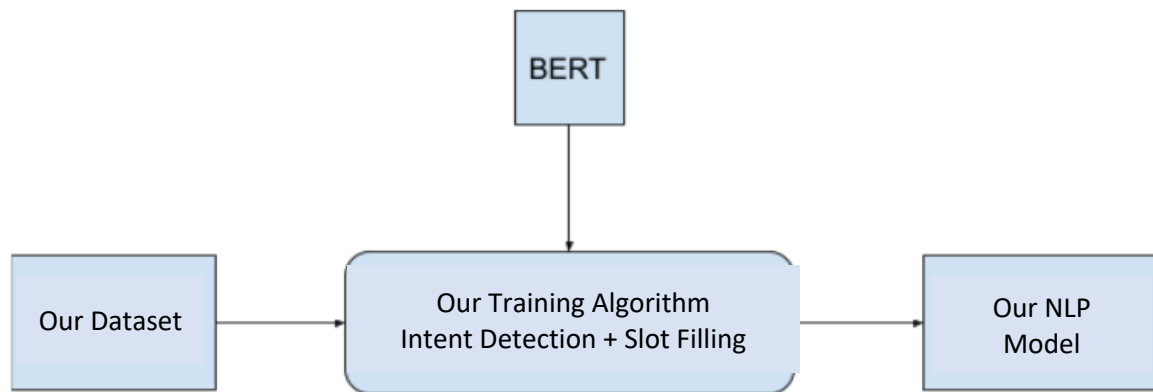
It is very common for voice command systems to be adversely affected by background noise. DtecA uses an advanced noise cancellation software module, which separates the human voice from the environmental noise. This module is important for microphones to provide the correct input.

5.4 Dataset

The shopping assistant will create a dataset according to the sentences that its users can say during their shopping experiences. A website will be developed to create the dataset. Data obtained from different sources, and from the Internet, will be uploaded to this website, thus generating a large dataset. It will be possible to do labeling automatically and manually .

5.5 NLP model

A new NLP (Neuro Linguistic Programming) model and training algorithm are being developed. The NLP model will be revealed by training with the created dataset and the training algorithm to be developed.



Within the training algorithm being developed, slot filling will be done in addition to intent classification. With slot filling, the necessary information will be extracted and classified in order for the right domain to work. In general, a 99% accuracy of the model is planned. According to the model's performance, the data will be corrected and retrained to increase the accuracy rate. Speed is also an important factor in the NLP model. Speed tests will be carried out according to the determined procedures and the system will function quickly. Thanks to the NLP model, it will be possible for DtecA to clearly identify, and make sense of, what is being spoken to it.

5.6 Text-to-Speech (TTS)

Text-based replies from the app are converted into speech in desired languages and spoken back to the user in a natural-sounding way. Everything will be able to be voiced, including dynamic data. DtecA's advanced TTS algorithms can generate human-like intonation and speak as naturally as if a real person is speaking. For example, a Spanish text received on the phone will be translated into your language. Such a comprehensive artificial intelligence, with such practical transitions between 22 different languages, will allow users to save the most valuable thing of our age: "time".

6. DTEC Token

6.1 DTEC Token's main role in the ecosystem

The DTEC Token will play an incentivizing role in the process of collecting and processing data from DtecA users. This approach will significantly contribute to the success and growth of the Dtec ecosystem by accelerating the development of Dtec's artificial intelligence technology (DtecB).

Dtec processes global information in general and makes it specific to individual users. In particular, in-car data collected from DtecA users are treated in such a way that they are processed both for the benefit of the user concerned and for the benefit of the general DtecA user base. Dtec respects users' security and privacy concerns and users who wish to do so can choose not to have even their processed data shared in the ecosystem.

DtecA users who agree to share their in-car data declare this decision at the time of sale and are rewarded with DTEC Token once a year. This process aims to provide users with the

highest level of experience and Dtec collects and learns from the data of users who have given their consent. Users reserve the right to opt out of data sharing if they have privacy and security concerns. In this respect, Dtec, unlike social media giants and other data collectors, offers its users a choice, and the process is managed transparently.

Users who choose to share data and contribute to the development of Dtec's artificial intelligence will be rewarded with DTEC tokens. The collected data will be securely transferred to Dtec (its network) and processed using the most advanced cryptography technologies. These data will be transmitted to all existing DtecA applications, enabling the DtecB artificial intelligence (applications) to learn from these data. This reward system is part of the "data sharing" part of the DTEC tokenomics, the details of which are available under the following subheading.

6.2 DTEC Tokenomics

Please refer to the attached document for more information.

The total supply of DTEC Token is limited to 450,000,000 units. This supply is distributed by dividing it into various categories:

Sales: The sales are planned to consist of 5 stages.

Seed: 16% of the total supply. Only 1% of the entire Seed Sales allocation will be opened at TGE (Token Generation Event). Remaining part will be locked for 6 months and then linear distribution will be made for 12 months.

Community Sale: 3% of the total supply. Only 3% of the entire Community-Sale allocation will be opened at TGE. Remaining part will be locked for 3 months and then linear distribution will be made for 12 months.

Pre-Sales: 4% of the total supply. Only 4% of the entire Pre-Sales allocation will be opened at TGE. Remaining part will be locked for 3 months and then linear distribution will be made for 10 months.

Strategic Sales: 1.5% of the total supply. Only 7% of the entire Strategic sales allocation will be opened at TGE. Remaining part will be locked for 2 months and then linear distribution will be made for 12 months. All tokens not sold at this stage will be burned.

KOL (Key Opinion Leader) Sale: 1% of the total supply. Only 10% of the entire KOL sale allocation will be opened at TGE. Linear distribution will be made for 10 months. All tokens not sold at this stage will be burned.

Public Sales: 2.5% of the total supply. Only 20% of the entire Public sales allocation will be opened at TGE, and then linear distribution will be made for 8 months.. All tokens not sold at this stage will be burned.

Team&Advisors: 10% of the total supply is reserved for the team and advisors. This part will be locked for 12 months and then a linear vesting will be made for 36 months. A long-term and reliable distribution plan has been projected.

Partners: 10% of the total supply is reserved for the partners. This part will be locked for 10 months and then subjected to linear vesting process for 36 months. This wallet will only be used for large partnerships and will be publicly announced early.

Liquidity: 12% of the total supply is reserved for the liquidity. Only 12% of the entire Strategic sales allocation will be opened at TGE and remaining part will be opened linearly over 12 months.

Development: 1% of the total supply is reserved for development of the Dtec project. This section will be used to take advantage of every new development in artificial intelligence and automotive technologies. This part will remain locked for 6 months and a linear vesting will be made for 36 months.

Launch Based Marketing: 5% of the total supply is reserved for the people such as world-renowned economists, cryptocurrency experts, Web3 experts, etc. for early marketing and influencer marketing from the launch date of the project. These specifiers will be used to create a strong initial impact to increase interest and participation in the TGE.

Only 1% of the entire LBM allocation will be opened at TGE. Remaining part linear distribution will be made for 36 months.

Staking: 8% of the total supply is reserved for staking. It will be locked for 1 month and then 60-months vesting has been planned.

Marketing: 14% of the total supply is reserved for the marketing activities. It will be locked for 5 months, and then a linear vesting has been planned for 48 months.

Airdrop: 2% of the total supply is reserved for the airdrop campaigns. Only 1,666% of the entire Strategic sales allocation will be opened at TGE. Remaining part will be locked for 6 months, and then a linear vesting has been planned for 36 months.

Community Incentives (Data Sharing Reward System): 10% of the total supply is allocated to address the growing demand for DtecA software and its derivatives in the automotive sector. This system will increase the use of DtecA in cars and smart homes, which in turn will increase the number of resources feeding the development of DtecB artificial intelligence.

Data sharing is an element that rewards and incentivizes users who agree to share data after purchasing DtecA. 10% of the total supply will be distributed with 3 months periods in decreasing proportions for 5 years. It will remain locked until January 2025.

Within the DTEC Token ecosystem, the calculation and distribution of rewards will take place at the end of the year and will be done once a year. A total of 10% (90 million units) is allocated to be distributed to all DtecA users for 5 years. At the end of the first 90 days, 0.69% (3.105.000 tokens) will be distributed, and this distribution rate will decrease with each quarters. Distribution rates are planned as follows:

2025 Q1: 0.69%

2025 Q2: 0.67%

2025 Q3: 0.65%

2025 Q4: 0.63%

In the first period distribution, 0.69% will be distributed equally to all DtecA users. However, only DtecA users who agree to data sharing will receive a reward; those who do not will have 85% of their reward tokens burned, and the remaining 15% will be transferred to the treasury through smart contracts, locked for 5 years after TGE. This approach aims to guarantee the sustainability of the system cycle.

In Reward distribution, 2,000 vehicles are set as the base figure. This means that each vehicle can receive a maximum of 1.552,5 reward tokens per quarter. However, only vehicles that agree to data sharing will be able to receive/use these rewards.

For example, let's assume that 2,000 DtecAs were sold in the first year and half of them agreed to data sharing;

A total of 3.105.000 tokens will be opened at the rate of 0.69% to be distributed in 2025 Q1, and this amount will be distributed equally to 2,000 vehicles. Accordingly, there will be 5,175 tokens per vehicle. These tokens will be sent to those who share data. Reward tokens of the vehicles that do not accept data sharing will be burned. In this case, 1.552,5 tokens per vehicle will be distributed to 1,000 vehicles for a total of 1.552.500 tokens, 85% of the remaining 1.552.500 tokens will be burned and the remaining 15% will be locked and transferred to the treasury.

If the number of sales remains below 2,000, 2,000 will still be used as the base figure and the amount of reward per vehicle will be divided by this number. In this way, there will be no more than 1.552,5 reward tokens for each vehicle. There will be no inflationary pressure and excess tokens will be burned with the same incineration mechanism.

This approach will prevent a small number of users from acquiring large amounts of tokens, especially in the case of low sales numbers in the early years, and will create a disinflationary effect through token burning.

The calculation of the data sharing reward tokens will take place in beginning of quarter each period. However, users' reward tokens are designed to be unlocked once the user has completed current quarter of purchasing DtecA. For example, if a user purchases DtecA in April 2024 and allows data sharing, their reward will be determined in June 2024 but their tokens will be unlocked in July 2024.

DtecA sales will be published on the Dtec website with invoice details, including DtecA serial numbers and the chassis number of the vehicle sold. All information about whether data sharing is allowed and all information about the reward, the amount of tokens to be burned will also be publicly available on the website. This transparency will increase the credibility of the Dtec ecosystem and users' trust in the reward process.

This reward system is designed to provide various strategic advantages within the Dtec ecosystem:

- *Increasing Real Sector Demand:* The reward system will increase the demand for DtecA software in the real sector by providing tangible returns to vehicle owners. This

will help expand the market penetration and utilization of the software and strengthen DtecA's presence within the automotive industry.

- *Encouraging Data Sharing:* By encouraging sharing of data by DtecA users, it will contribute to the development of Dtec Brain AI and the overall ecosystem. This incentive will enable users to participate more actively in the ecosystem and allow for the continuous improvement of Dtec's artificial intelligence capacity.
- *Expanding Token Use Case:* The use case for the DTEC token will be expanded through the reward system. This expansion will increase the practical applications and value of the token, making it more attractive to users.
- *Disinflationary Effect and Supply Restriction:* The burning of rewards if the annual base sales amount is below 2,000 units, in addition to burning of rewards for the users who do not agree to data sharing, will create a disinflationary effect and limit the token supply. This approach is critically important for maintaining and increasing the token's market value. Restricting the token supply will contribute to maintaining and increasing the value of the token in the long term.

This reward system is designed to support the overall health and sustainability of the Dtec ecosystem and represents a strategic approach to increase DtecA's influence in the automotive sector.

6.3. Disinflationary Practices and Business Plan

This section describes the disinflationary processes and token burning mechanisms to support the sustainability of the DTEC tokenomics:

Allocations to be burned directly:

- In Community Incentives Allocation (Data Sharing Reward System): Users who own DtecA and do not share their data will have 85% of their tokens burned, while the remaining 15% will be transferred to the treasury through smart contract as locked for TGE+5 years (For details, see 6.2 Community Incentives/Data Sharing).
- Tokens not sold in Strategic, KOL and Public Sales: All tokens not sold will be burned.
- Tokens Acquired on the DtecA Platform: Once DtecA becomes a platform, 85% of the tokens acquired from purchases made with tokens here will be burned directly.

Obtaining additional liquidity from the real sector - Buyback System and Tokens to be burned:

This system is designed to support the disinflationary nature of the DTEC tokenomics. Each year, DTEC tokens will be bought back with a percentage of the proceeds from the following revenue sources and a portion of them will be burned.

- Profit from DtecA Software Sold: 15% of this cash profit will be used for the buyback and burned.

- Profits from Data Marketed for Artificial Intelligence Projects: 15% of the cash profit from the sale of the outputs generated by the collected data will be used for buyback and burned.
- Profit from NFT Sales: 15% of the cash profit from NFT sales will be used for buyback and burned.

Every year, with the funds from the sum of the above-mentioned sources of cash income, additional liquidity will be injected into the board in the dtcc token project.

This liquidity, buy-back and incineration process will be carried out as follows:

The profit allocated for the buyback program is added to the DTEC token's price mechanism as liquidity. This extra outside liquidity is not transferred to the company treasury when it is fully converted into tokens.

The community is notified and 85% of the tokens are burned, creating a disinflationary effect by reducing the supply of tokens.

The remaining 15% will be transferred to a private wallet visible to the entire community, not to be used until 5 years after the TGE. This accumulation will be used for the vision and sustainability of community incentives (data sharing), stake, or similar projects after the 5th year of the project. This strategy aims to support the long-term health and sustainability of the token economy.

Developer Locking Mechanism:

- Like car operating systems and consoles, Dtec could create a platform that hosts its own apps and app stores. Developers who wish to develop and market applications on DtecA will need to lock DTEC tokens. Once an app is on the platform and started running, this lock will be adjusted so as to be permanent.
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6.4 DTEC token use cases

The DTEC token is a digital asset that aims to create a digital economy for all Dtec users. Users can use the tokens in various ways to access Dtec services.

- Data Sharing Rewards:
 - DTEC token will be distributed as a reward to users who share data for the development of the Dtec ecosystem.
- Electric Vehicle Charging Stations:

- In electric automobile charging stations produced by Dtec and its partners, the right to priority and discounted transactions will be provided in accordance with legal regulations.
- Early Access and Discounts:
 - Dtec token holders will receive first information about the Dtec project's sales and software purchases and will be entitled to priority and discounted access.
- NFT Transactions:
 - DTEC token holders will be able to use their tokens to purchase NFTs designed specifically for the Dtec project.
- In-App Acquisitions:
 - Users will be able to earn DTEC tokens by completing certain tasks using the Dtec app. The cost of items set for these tasks will never be more expensive than the amount of tokens required to purchase them.
- Tiered Access with DTEC Tokens:
 - By holding a certain number of DTEC tokens, users will gain tiered access to various DTEC services.
 - Tier One: Free Service
 - Access to the DTEC app on Android and iOS platforms.
 - Support for 2 languages, English and local language.
 - Service enabling users to ask questions with a limit of 30 questions per day or have sentences translated. (It allows to translate.)
 - Users who want to experience unlimited talk experience with DTEC can purchase upgrades later on.
 - Tier Two: Comprehensive Package
 - Access to DTEC software from vehicle embedded devices and mobile devices.
 - 7 languages and simultaneous translation feature. Based on Tier One with an increased limit of 60 questions per day.
 - Agreements are made with automotive companies for the installation of DTEC assistant in vehicles and DTEC activation is provided on

platforms developed by automotive companies against an annual membership fee.

- Users can purchase the Tier Two with DTEC tokens or credit card options.

○ - Tier Three: Advanced Features

- It allows the management of voice-controlled vehicle equipment.
- 12 languages and simultaneous translation feature. The daily limit of 60 questions also applies to this tier.
- It controls in-car equipment such as windows, lights, headlights and entertainment systems through voice commands.
- Similar to the Tier Two, agreements are made with automotive companies for installation against an annual membership fee.
- DTEC tokens or credit card payment options are available to purchase the Tier Three.

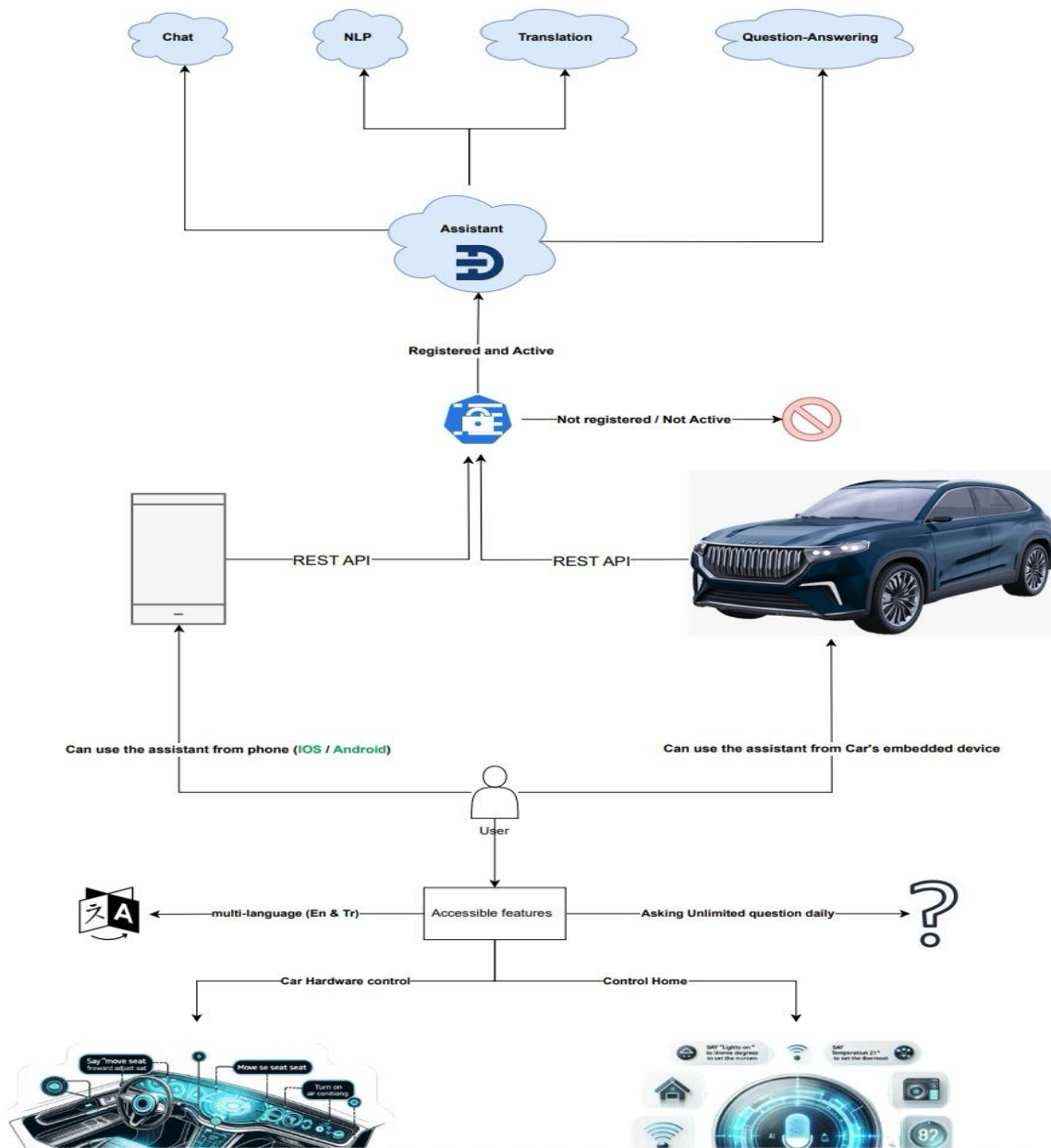
○ - Tier Four:

- Personalised services and services
- For these personal services, the installation of additional modules, devices and receivers in the user's vehicle and authorisation of data sharing with the signed consent of the customer
- 22 languages and simultaneous translation feature. More advanced management of voice-controlled vehicle equipment.
- Compatible with smart devices on iOS and Android, it enables control over smart home systems and IoT devices through voice commands within the DTEC app.
- The functionality of the DTEC assistant is enhanced to work seamlessly on phones, in vehicles, at home, in offices or anywhere else.
- DTEC makes agreements with automotive, smart home and IoT companies for annual subscription fees and expands the use of DTEC Assistant on 3rd party devices.

- Users wishing to move to DTEC Tier Four can use DTEC tokens or credit cards.

Users wishing to upgrade to DTEC Tier Four can use DTEC tokens or credit cards. To fully utilize this tier, additional modules and devices must be installed in vehicles. These necessary add-ons require the vehicle to be brought to contracted dealers and a DTEC distributor for installation. At this stage, user consent for data collection processes is required. A special consent form is prepared to clearly express user consent for these operations and allow for its withdrawal if necessary. These procedures and user rights are detailed in the 'DTEC Data Security and Compliance Policy' Section 8.

Stage Four



These use cases aim to actively utilize DTEC tokens in various aspects of the ecosystem and increase the overall value of Dtec.

7. Dtec Ecosystem's advanced functionalities and added value

7.1 Secure cryptocurrency transactions

DtecA empowers users to securely transfer cryptocurrencies using voice commands, providing a seamless and convenient method for transactions while on the move.

7.2 Transport system integration

DtecA seamlessly integrates with charging and gas stations, acting as a transport system that allows users to refuel their vehicles without the need to leave the comfort of their cars. Through its advanced capabilities, users can instantly pay for services using the native DTEC token, ensuring swift and hassle-free transactions.

7.3 IoT device connectivity

DtecA effortlessly connects with an array of IoT devices, enabling users to control their home appliances, security systems, and other smart devices using simple voice commands.

7.4 Basic operations and information

DtecA seamlessly performs a wide range of basic operations, including face and emotion recognition, reading news, providing weather information, sending emails, recording reminders, answering questions, and engaging in conversational interactions. By providing valuable information and assistance, DtecA enriches the driving experience and serves as a reliable companion.

Equipped with advanced sensors, DtecA, when used in smart homes, is capable of detecting unusual situations in users' homes, such as the presence of unknown people or fire hazards, and then connecting and alerting the vehicle.

DtecA features a comprehensive "health module" that utilizes sensors in the vehicle, smartwatches, and smartphones to monitor the driver's health. DtecA can integrate with smartwatches to monitor heart rate and other health conditions and notify emergency services immediately in case of emergencies, ensuring the safety and health of the driver.

7.5 Data sharing and collaboration

DtecA facilitates the sharing of environment scanning and memory data with other DtecA apps operating in different vehicles. This collaborative approach enhances collective intelligence and expands the assistant's knowledge base, benefiting all users within the DtecA ecosystem.

8. Dtec Data Security and Compliance

8.1 Use of Data

Dtec will gather data with the user's permission. The collected data does not identify users directly; it includes cause-and-effect relationships, user feedback, and external data sources.

Dtec employs advanced cryptographic technologies to safeguard personal information, privacy, and data security throughout the collection process. This data is considered feedback from users who have given their consent, and is used to train artificial intelligence models. When data is sent from DtecA to the server, information such as the source or identity of the data is not stored. The collected data, location information, etc. are not stored or saved in the DtecA software or other IoT devices owned by the user and thus cannot be retrospectively analyzed.

This creates a data network that is much more secure than cameras in taxis or search engines that use conversations for advertising. Additionally, the collected data goes through several layers of security when being processed by artificial intelligence models.

8.2 Legal Compliance in Data Sharing

Our processes are rigorously structured in accordance with the standards set by the European Union General Data Protection Regulation (GDPR).

DTEC engages in data exchange solely with Tier 4 users. To transition to Tier 4, users are required to deliver their vehicles to authorized or DTEC distributors. Transitioning to Tier 4, which entails sharing data, benefiting from personalized services offered by artificial intelligence, and earning tokens, necessitates a data sharing agreement between the user and DTEC as stipulated by GDPR Article 6(1a).

This agreement is established with the explicit consent of the user, who retains the right to terminate the agreement at any time, in accordance with GDPR Article 7(3).

All collected data is regarded as feedback from consenting users and is utilized to improve artificial intelligence models. When transferring data from DtecA to our servers, no information regarding the source or identity of the data is retained.

DTEC will regularly provide the necessary legal reports on data sharing to regulatory authorities.

9. Market potential and strategic partnerships

9.1 Global connected car market overview

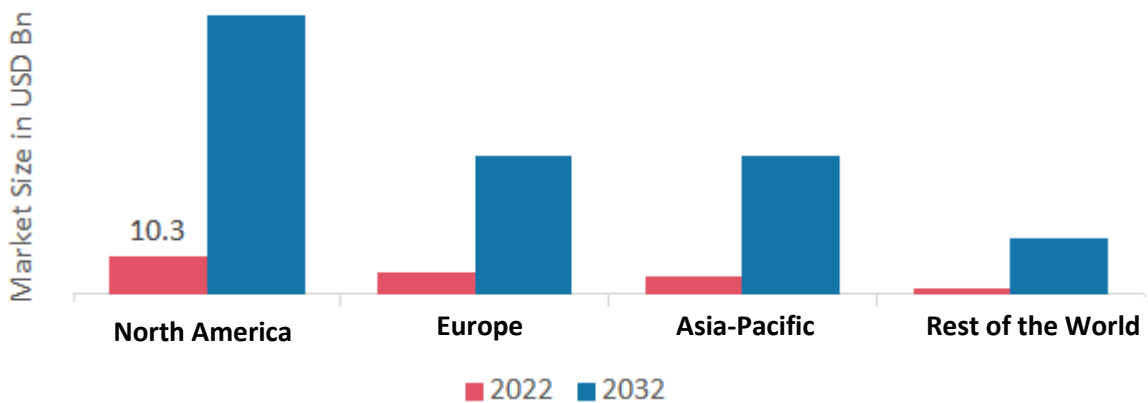
The connected car market is witnessing a rapid growth due to the increasing demand for enhanced user comfort, safety, and convenience. Connected cars are vehicles that can communicate with other devices, such as smartphones, tablets and infrastructure, through the Internet. They can offer various services such as navigation, multimedia streaming, cybersecurity, social media, e-call, autopilot and home integration. Connected cars can also monitor and optimize their own performance and provide real-time data to the driver and passengers.



Source: www.precedenceresearch.com

Precedence Research’s [2023 market report](#) reveals that the global market for connected cars has seen an estimated value of USD 66.4 billion in 2022, and it is projected to reach approximately USD 286.89 billion by 2032, exhibiting a compound annual growth rate (CAGR) of 15.76% during the period from 2023 to 2032.

Automobile manufacturers are placing great emphasis on incorporating connectivity technology into their vehicles. Data is a critical element in the automotive industry, and connected vehicles link the car's infotainment system with the user's smartphone. Besides, IT giants like Google and Apple are developing cybersecurity applications that enhance car security and alert owners if unauthorized access is detected from other devices. For instance, DENSO and Dellfer have collaborated to develop the cybersecurity product ZeroDayGuard 1.0 specifically for the automotive industry.



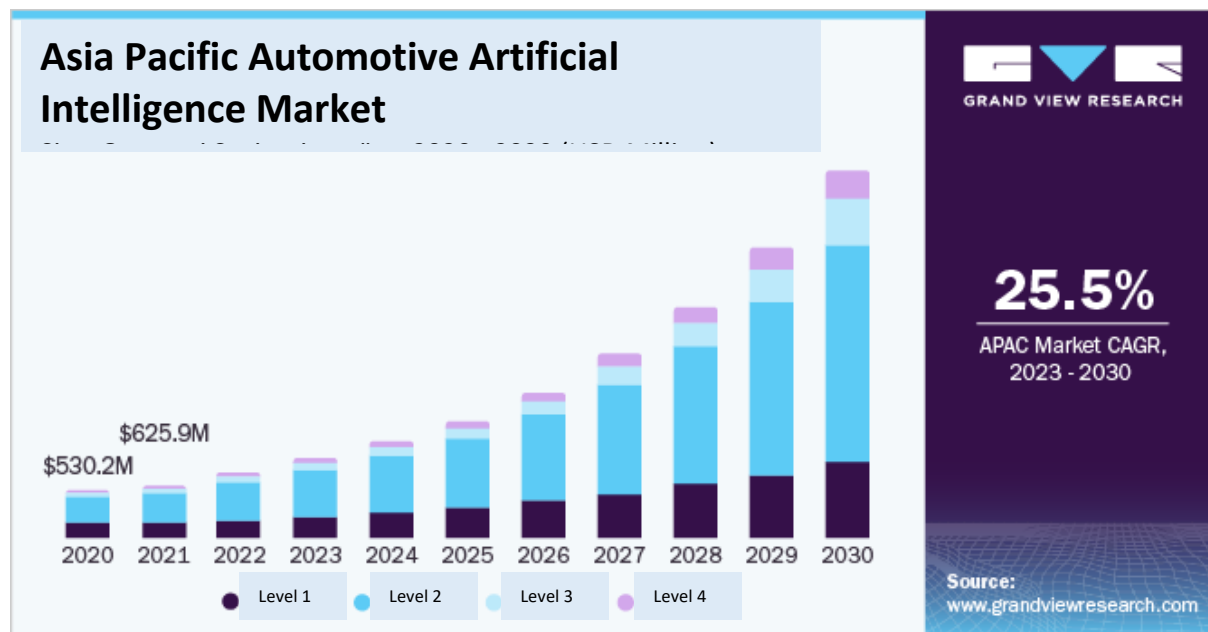
According to a [2023 report by Allied Market Research](#), North America holds the largest market share for connected cars due to the high adoption of advanced technologies and stringent safety regulations. Europe follows North America that is the largest market. Asia-Pacific is expected to witness the fastest growth in the connected car market due to the rising disposable income,

urbanization, and government initiatives. Moreover, according to a [2023 market report by Juniper Research](#), the development of 5G infrastructure and autonomous vehicles will further boost the connected car market in the coming years.

9.2 AI-enabled vehicle assistant market overview

Some of the leading players in the AI-enabled vehicle assistant market are Amazon (Alexa), Google (Assistant), Apple (Siri), Microsoft (Cortana), and Nuance (Dragon Drive).

The automotive AI market is a rapidly growing sector. According to a [2022 report by Grand View Research](#), the global automotive AI market size was valued at USD 2.54 billion in 2021 and is expected to expand at a compound annual growth rate (CAGR) of 21.6% from 2022 to 2030.



The influence of AI extends beyond in-vehicle infotainment systems, as it serves as a catalyst for innovation in the entire automotive industry. According to a [December 2022 Prescient Strategic Intelligence report](#), automakers who are now embracing AI technologies are going to be able to push the boundaries of what is technologically possible, leading to the development of more advanced features and functionalities.

According to a [2023 report by Market Watch](#), the In-car Voice Assistant Market is projected to reach a multimillion-dollar size by 2029, compared to 2023, exhibiting an unexpected compound annual growth rate (CAGR) during 2023-2031.

The [Prescient Strategic Intelligence report](#) also states that by recognizing the importance of AI-driven connectivity solutions, various automotive original equipment manufacturers (OEMs) are now forming collaborations with technology vendors. These partnerships allow OEMs to leverage the expertise of technology companies, such as Dtec, and integrate the latest connectivity solutions into their vehicles.

Dtec holds immense potential to gain a permanent position in the connected car industry by offering a unique combination of features, including advanced location intelligence, personalized service, and seamless IoT integration. Automobile manufacturers increasingly prioritize connected experiences, and DtecA provides a distinct competitive advantage by harnessing emerging technologies. The future scope of DtecA involves continuous

improvement of AI capabilities, expanded compatibility with a wider range of IoT devices, and strategic partnerships with car manufacturers to embed the assistant directly into their vehicles.

9.3 Strategic partnerships

- Our project has the backing of TUBITAK's 1507 R&D Program and the ongoing support of KOSGEB.
- Dtec is in partnership negotiations with several VIP car manufacturing and design companies valued at more than 500 million dollars and ranked in the Top 30 in their respective fields. This will allow DtecA to enter very large markets and increase its retail sales.

Collaborating with other similarly renowned companies will not only bring numerous benefits for Dtec and its user base of car drivers but also will ensure that Dtec remains at the forefront of innovation in the automobile industry by leveraging the expertise and resources of these esteemed partners to continuously enhance its features and capabilities.

Some pending partnerships:

- Automotive companies
Dtec is currently in talks to partner with luxury car manufacturers.

Dtec will continue to forge strategic alliances with leading companies and brands in order to strengthen DtecA's position as the ultimate virtual assistant for drivers and showcase Dtec's commitment to providing a highly personalized, technologically advanced, and interconnected ecosystem for vehicle owners.

10. Future scope

The Dtec system can also be adapted for use in other sectors, such as voice shopping assistants, voice assistants in banking, smart home systems, and even the Metaverse. Utilizing these emerging sectors will considerably expand Dtec's market share. The goal for Dtec is to become the common universe for all machine-learning electronic devices in the future.

10.1 Expansion beyond regular passenger cars

While DtecA was originally designed for passenger vehicles, the long-term vision includes adapting the system for use in air, sea, rail and different types of vehicles. This expansion will not only broaden Dtec's user base but also contribute to the overall improvement of the driving experience for a larger group and create a common universe for IoT-enabled electronic devices.

The ultimate goal of Dtec is to establish a digital ecosystem that serves as a common communication network between all day-to-day devices and hardware integrated into the

system. Dtec will act as the central hub, allowing users to interact with all their devices through a single voice-operated interface, regardless of the brand or type of hardware.

10.2 Adaptation into other sectors

DtecA's potential extends beyond the automotive industry. By leveraging its AI capabilities, blockchain integration, and voice-operated interface, DtecA can be adapted for use in various sectors, opening up new opportunities and expanding its market share.

- Voice shopping assistants

The rise of e-commerce and voice-enabled devices presents an ideal opportunity for DtecA to serve as a voice shopping assistant. Thanks to the developed NLP (Neuro Linguistic Programming) model, DtecA can understand and make sense of natural speech language and transfer it to relevant points.

DtecA's innovative dialogical AI algorithm gives answers in 22 languages to all questions asked by the user, making the user feel like they're talking to a real person. According to IDC's Worldwide Semiannual Cognitive Artificial Intelligence Systems Spending Guide, dialogical AI will reach \$77.6 billion in 2022, i.e. A threefold increase compared to 2018. With the recent boom in the AI sector, NLP-equipped smart shopping assistants are already becoming a major trend, which DtecA is very comfortably positioned for.

- Voice assistants in banking

Voice assistants have the potential to revolutionize the banking industry by offering seamless and secure interactions for users. DtecA can be adapted to provide personalized banking services, including balance inquiries, transaction history, fund transfers, and even voice-based authentication for enhanced security.

- Smart home systems

The integration of DtecA with smart home systems allows users to control and manage various IoT devices within their homes using voice commands. This seamless integration enhances convenience, energy efficiency, and home automation capabilities.

For example, by connecting DtecA to smart home devices such as thermostats, lighting systems, security cameras, and appliances, users can control their home environment effortlessly. They can adjust the home temperature, turn on/off lights, lock doors, or even activate the coffee maker, all through simple voice commands while driving or from any location.

10.3 Modular development platform

To encourage further innovation and integration, Dtec will offer a modular development platform that allows developers to easily and seamlessly incorporate any smart hardware not yet registered in the Dtec system. This open and adaptable approach ensures compatibility with a wide range of devices and encourages collaboration within the developer community.

For example, developers will be able to integrate their IoT devices, smart home systems, or specialized hardware with DtecA by leveraging the modular development platform. This allows for the creation of unique use cases, such as controlling a robotic vacuum cleaner through voice commands or managing a hydroponic system via DtecA's voice-operated interface.

11. Patents

- The patent numbered **2017/12836** and named "**VIP Smart Vehicle System**" was approved on 22.08.2022. We have all the rights.
- The patent application numbered **2023/006162** and named "**Smart Vehicle Assistant System with Artificial Intelligence**" was approved by the Turkish Patent and Trademark Office and the research phase was started.
- The international patent application numbered **PCT/TR2022/050946** and named "**SMART VEHICLE ASSISTANT WITH ARTIFICIAL INTELLIGENCE**" was filed on 05.09.2022. Initial review was positive. The process continues.

12. Conclusion

Dtec represents a significant leap forward in modern driving experiences, offering a blockchain-powered, GPS-enabled virtual assistant that not only anticipates drivers' needs but also saves valuable time and provides advanced location intelligence solutions.

Through seamless IoT integration, emotional intelligence algorithms, and continuous learning abilities, DtecA delivers highly personalized service, creating a digital ecosystem where all smart devices and IoT hardware within the car can seamlessly communicate. By leveraging cutting-edge technologies and prioritizing user satisfaction, Dtec aims to become the leading virtual assistant in the automotive market, transforming the way drivers interact with their vehicles and enhancing their overall driving experience.

Thanks to its ecosystem intertwined with the real sector and its reward system for data sharing, the demand for DtecA software will increase linearly; and this will increase the number of resources for the development of DtecB (the artificial intelligence of the ecosystem).

The intertwined and sustainable growth of DtecA and DtecB will also expand the Dtec token use case. In this way, a long-lasting, ever-expanding, and cyclical ecosystem is built.

Appendix 1

RoBERTa, XLNET, DeBERTaV3, GNN models were compared from different angles. Each model has its own features, but it is explained in the document that BERT is the most suitable model because it gives fast and accurate results for the basis of the NLP model we have developed (see attached document).

Attached document: **State-of-the-Art Models for Text Classification Task.pdf**

Appendix 2

An interaction diagram of the software commands the Dtec system runs and how it works in general:

