

Asr Gooyesh Pardaz

Making Life Easier

Empower your systems using speech solutions

Overview

ASR Gooyesh Pardaz Co. (AGP), as the first and the only Iranian company in speech technology, was established in 2002 to develop speech and image processing systems by a number of experts from Sharif University of Technology. AGP is the leader of speech processing technology for Persian language and has developed various applications and solutions to "Making Life Easier".

Our company has developed continuous/isolated speech recognition and text-to-speech engines in Persian and English to expand various productions and solutions such as voice dictation system, speech-enabled telephony systems, keyword spotting, voice commands, speaker recognition, and text reading systems.

AGP products

- Nevisa: The first Persian/English speech dictation system
- Niusha: The first intelligent speech-based computer-telephony system
- Arlana: Persian text to speech system
- Parsia: Speech to speech translation (Persian to English/Arabic)
- Kara: Voice command recognition
- Shenasa: Speaker recognition (identification/verification) system
- VajeYab Jouya: A system for search in speech signal (keyword spotting)
- NevisYar: The first intelligent Persian typing system
- Pusha: Information hiding in images (steganography)
- Padida: Steganography detector in images

Today, the company has an integrated group of professional and experienced staff with successful history of research in product development. In addition to offering numerous products in the fields of Artificial Intelligence (AI), Persian and English speech, and image processing, we are able to carry out customized projects, provide effective consultations, and offer valuable services in various areas.

Activities

- o Design and Development of intelligent softwares and hardwares
- o Signal processing (speech and image)
- o Speech recognition and voice dictation (speech to text)
- o Spoken dialogue systems and IVR systems (speech recognition/synthesis)
- o Speech synthesis and text reader (text to speech)
- o Speaker identification/verification
- o Natural language processing (NLP)
- o Speech quality enhancement
- o Programming on microcomputers and handheld devices (DSP, mobile phones, etc.)

Customers



Certificates and Awards

- Distinguished company in FINEX2009 and FINEX 2012, Tehran-Iran.
- Ariana- text-to-speech, the best application for development of the Persian script and language in digital environment, 5th International Digital Media Festival and Fair, Tehran-Iran, 2011.
- Three awards in 2nd International Digital Media Festival and Fair, Tehran-Iran, 2008:
 - o The best tool for Persian content construction
 - o The best R&D application of multimedia software
 - o The best application for development of the Persian script and language in the digital environment
- Distinguished in 4th National Sheikh Bahai Technopreneurship Festival, Isfahan-Iran, 2008.
- Winner of the 3rd place for the superior technology in international ICT Exchange Forum (ITEF), Tehran-Iran, 2007.
- Registering 3 Iranian patents, 2006
 - o A new method for out of vocabulary detection in speech recognition systems
 - o A general purpose Persian grammar model based on GPSG
 - o PC-PMC method for the robustness of speech recognition systems (with the application in continuous, speaker independent, large vocabulary Persian voice dictation, Nevisa)
- Getting the technical certificate from Iranian Research Organization for Science and Technology (IROST)
- Member of Iranian High Council of Informatics and Iranian Electronic Publishers Association
- Participation in exhibitions and conferences (Telecom, Elecomp, DMF, ITU, GiTex, ...)
- Publishing numbers of reputable papers and talks in national and international conferences and journals



Nevisa

Persian/English Voice Dictation

Nevisa is the first Persian (Farsi) speech dictation software designed and developed based on a large vocabulary, speaker independent speech recognition engine. Nevisa also supports English language and can be used as an English speech dictation system. Using this package, you do not need to type by keyboard, just talk to microphone and Nevisa converts it to text. Speech recognition facilitates typing, saves considerable time and consequently reduces costs.

Nevisa Versions

- **Nevisa-Professional:** Specialized for organizations and agencies, typists with a high diversity of typing tasks
- **Nevisa-Advanced:** For personal and home users including writers, journalists, professors and students.
- **Nevisa-Medical:** To prepare radiological reports such as MRI, CT, etc.
- **Nevisa-Legal:** To transcribe judicial and legal texts

Nevisa is available in single and enterprise (on network) versions.



Tel-Fax: (+98 21) 66 55 15 25
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www.asr-gooyesh.com
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info@asr-gooyesh.com



Nevisa

Persian/English Voice Dictation

Nevisa Features

- High accuracy (up to 95%)
- Real-time typing, it types as you talk
- Working in all typing environments such as M.S. Word
- Writing numbers and punctuations by talking
- Converting pre-recorded audio files into text (offline mode)
- Containing most frequent words and phrases
- Capability to add new words to the vocabulary by the user
- Speaker adaptation capability to learn the speakers' accent
- Environmental adaptation capability
- Automatic speaker recognition ability
- Text-to-speech ability to read the typed text
- Supports voice commands to run and control applications
- Providing record history for the next editions of texts
- Equipped by a customized editor with special facilities
- Multilingual user interface (English and Persian)
- Ability to customize vocabulary for specific applications
- Having single-user and multi-user network versions



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Niusha

Speech-Enabled Computer-Telephony System

Niusha is the first computer-telephony (CT) system in Persian which not only supports all features of the classical CT systems (Touch-Tone based), but also has intelligent speech processing capabilities. Speech technology solutions such as speech recognition facilitate the customers to interact with CT systems by voice saving time and cost by reducing the complexity of the systems and decreasing call Durations.

In addition to support classical touch-tone based abilities, Niusha also supports intelligent features including **automatic speech recognition, text to speech, speaker identification on voice and searching in telephony speech.**

- The user can use automatic speech recognition to say the commands instead of pressing keys. It enables the system to avoid long menu readings and lets the user to use a natural way to enter the inputs.
- By using text-to-speech, Niusha is able to convert any text into speech leading to high flexibility in changing the messages played by the system instead of pre-recorded voices.
- Using speaker recognition (identification/verification) enables Niusha to recognize the caller by his/her voice. This capability can be utilized as a biometric to identify caller and to enhance security (e.g., in telephone banks).
- By deploying word spotting in telephony speech in Niusha, the system can be made sensitive to certain words.

Niusha Applications

- Auto-attendants
- Speech-enabled Interactive Voice Response (IVR)
- Telephone-bank systems
- Customer Relationship Management (CRM) systems
- Reservation by phone (airlines, trains, cinemas, ...)
- Educational systems (training, information, ...)
- Medical and treatment systems
- Entertainment systems (games, drawing, astrology and horoscope)
- Forms and telephone surveys
- ...

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info@asr-gooyesh.com



Niusha

Speech-Enabled Computer-Telephony System

Niusha Features

- The ability to receive users' requests via speech (speech recognition technology)
- Automatic text reading capability using text-to-speech technology
- Speaker's recognition capability
- Integration capability with all telephone infrastructures such as VOIP and analog
- No restrictions on the number of phone lines (extra hardware is needed proportionally)
- Custom designed system with user-creatable scenarios
- Call diverting and conference calling
- Voice mailbox system
- Sending and receiving faxes
- Sending and receiving short messages (SMS)
- Calendar and time appointment system
- Capability to record messages, feedbacks, suggestions and or question/answer
- Recording orders
- Connecting to database
- Reporting capability



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Ariana

Persian/English Text-to-Speech

Ariana is a text to speech engine in Persian language that is able to read the text naturally. Ariana in combination with screen-reader software such as Jaws aids visually impaired people to interact with computer efficiently and read e-books, emails, news and websites comfortably. Ariana can also help the companies that offer information services and audio books to convert text information/books into speech, saving time and money, especially when compared to the alternative of using pre-recorded speech files.

Ariana Versions

- Ariana-Screen Reader: text-to-speech for visually impaired people
- Ariana-Book Reader: text-to-speech for general purpose application
- Ariana-Service: text-to-speech module/SDK/web service for developers and businesses
- Ariana-Mobile: text-to-speech for embedded systems and cell-phones

Ariana Features

- Supports English and Persian languages
- High quality and natural speech production
- Real-time speech production
- Ability to read texts in well-known formats (txt, doc, pdf, ...)
- Compatibility with JAWS software
- Using advanced NLP techniques to detect Persian homographs and words containing Ezafe
- Online (voice-play) and offline (voice-files) modes
- Can be used in other softwares as a complementary module
- Customizable for specific applications



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Kara/ Parsia/ NevisYar

Persian Voice Command/ Persian Voice Translator/ Persian Intelligent Typing

Kara Persian Voice Command

Kara voice command recognition enables users to run and control their softwares installed on their personal computers by voice. Kara makes working with computers easier and faster, especially for users not familiar with computers and people with physical disabilities.

For example, user can say "Connect to Internet" or "Internet", and the internet browser will be opened and connected. Alternatively, when working with a text editor, by saying "enlarge the font size" or "larger", the font size of the written text becomes larger in your editor.

- Running and controlling programs by voice
- Creating voice command capability for any software
- Speaker-independent voice recognition

Parsia Persian Voice Translator

Parsia is the first speech to speech voice translator software in Persian that translates uttered sentences and phrases from Persian into their English and Arabic equivalents. Of course, Parsia can be extended to other languages.

- Translating sentences from Persian speech to English/Arabic speech
- Easy, fast and accurate translation
- Including common phrases in everyday conversations

NevisYar Persian Intelligent Typing

NevisYar is the first intelligent typing software in Persian that is developed to increase typing speed. When you are typing, by press the initial letters of each word or phrase, the words or phrases are speculated as a whole by NevisYar and then a list of possible options are provided for the user.

- Automatic completion of words while typing
- Predicting the next word
- Reducing typing errors and misspellings
- Compatible with MS Office 2003



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Shenasa/ VajeYab Jouya

Speaker Recognition by Voice/ Persian-English Word Spotting System

Shenasa is a speaker recognition system including speaker identification and speaker verification tasks by voice. It can be used in various security and access control tasks, alone or together with other security methods. Shenasa speaker identification engine operates under various constraints and that can run online or offline.

Shenasa Features

- High accuracy
- High-speed processing
- Online and offline operations
- Ability to manage possible target speakers by the operator
- Online monitoring of multiple radio, TV, or other multimedia channels
- Support a variety of voice formats and communication channels such as telephone, mobile, VOIP, ...

VajeYab Jouya is a Persian/English keyword spotting system the purpose of which is to search and detect occurrences of predefined keywords in continuous speech. Thanks to recent accomplishments in our research, Jouya keyword spotter can process speech from multiple sources in various formats and tag the spoken keywords in real time while maintaining good detection rates. Jouya also can serve as an extremely cost effective solution for your speech monitoring needs. Some of Jouya applications are:

- Keyword monitoring applications such as lectures indexing, and broadcast monitoring
- Command control devices and dialogue systems
- Audio document database indexing

Jouya Features

- High accuracy
- Online and offline search capabilities
- Ability to work with popular audio formats
- Ability to add or change the keywords by the operator
- Speaker independent, but it has the ability to adapt to a speaker for better performance
- Capability to be integrated as a module or SDK in other applications
- Comprehensive reporting system

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Pusha / Padida

Image Steganography System/ Image Steganalysis System

Pusha Secure transferring of a secret message has always been important to people, and it is not surprising that digital steganography, the art of communicating without revealing that the message exists has been greatly considered over the past years. Pusha is a software for hiding various types of information (such as text messages, images and voice) in images. This system is able to retrieve concealed information on the receiver side with a predetermined key.

- Utilizing various methods for hiding information in images
- Supporting different images (different sizes and formats)
- Encrypting the data for increased security

Padida is a steganalysis software that detects stego images (images containing hidden information). It examines suspicious images and discovers the ones containing embedded information.

- Using different approaches to analyze and identify suspected images
- Identifying a wide range of methods for embedding information in images
- Supporting different images (image sizes and formats)
- Rapid scanning of local image files
- Scanning URLs and E-mails
- Online monitoring (similar to anti-virus softwares) and delete or quarantine suspected images
- Logging and reporting abilities



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[www.asr-gooyesh.com](http://www.asr-gooyesh.com)  
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[info@asr-gooyesh.com](mailto:info@asr-gooyesh.com)  
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