

# Pooya Nasiri

A.I. Engineer

## Summary

AI and Machine Learning Engineer with 13+ years of experience developing innovative AI solutions and software applications. Skilled in Python, TensorFlow, and cross-platform development (C, C++, C#, Swift). Proven track record of optimizing performance and delivering impactful AI-driven products. Completing a Master's in AI at the Unipd. Seeking to contribute to a dynamic company as an AI Engineer.

## Core Skills

- **Programming Languages:** Python, C, C++, C#, Java, Swift, ...
- **AI/ML Frameworks:** TensorFlow, PyTorch, Keras, Pandas, Scikit-learn
- **Software Dev.:** Windows, MacOS, Secure Auth. (FIDO, PKI), REST APIs
- **Databases:** SQL, MySQL, MongoDB, PostgreSQL, NoSQL
- **Microcontroller Dev.:** Arduino, Atmel, ESP, STM32, Raspberry Pi, PIC
- **Tools & Platforms:** Git, GitLab, Docker, AWS, Azure, GCP, CI/CD

## Work Experience

- **A.I. Engineer, Javis SRL** (*Remote, Italy*) *Mar 2024 - Dec 2024*  
Intern in AI and ML projects, developing intelligent systems for logistic optimization using Python and deep learning frameworks.  
*Skills:* Classic AI, Deep Learning, Time Series, Machine learning
- **Freelance Software Dev.** (*Hybrid, Worldwide*) *Jan 2009 - Sep 2022*  
Engineered various software solutions, and AI/ML/DL research projects.  
*Skills:* OOP, AI, Deep Learning, Python, C++, C#, WPF
- **Software Dev., Vancosys Inc.** (*Remote, Canada*) *Nov 2021 - Sep 2022*  
Designed cross-platform apps for IDmelon's authentication solutions using C#, Swift, and cryptographic protocols (FIDO, PKI, OpenSSL).  
*Skills:* Secure Authentication, Swift, Cryptography, FIDO
- **Senior Software Dev., Azar Liopad** (*Hybrid*) *Aug 2020 - Sep 2022*  
Full-stack developer for smart firefighting and safety equipment software using C# and Visual Studio, with serial and client/server communication.  
*Skills:* C#, WPF, .NET, Visual Studio
- **Hardware Specialist, Tajhiz Teb** (*on-site*) *May 2019 - Mar 2021*  
Led R&D in hardware for smart medical gadgets, including mobile ECG devices. *Skills:* IoT, Arduino, ARM, client/server programming, PCB Design

## Contact Info

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## Languages

- **Italian:** B2-Intermediate
- **English:** C1-Advanced
- **Persian:** Native

## Interests

- 🧠 **Deep Learning:**  
CNN, DNN, RNN, LLM, NLP, Transformers
- 👁️ **Computer Vision:**  
OpenCV
- 🔧 **Machine Learning:**  
Optimization, OR
- 📊 **Data Science:**  
Data mining, statistical analysis, predictive and generative modeling

## Soft Skills

- 👥 **Team Collaboration**
- 📋 **Agile Management**
- 🛠️ **Problem Solving**
- 🗣️ **Technical Communication**
- 👤 **Mentorship**
- 🔄 **Adaptability**

## Highlight Projects

- **Bone Age Prediction:** Developed a deep learning model for predicting age from X-ray images of hand bones using Shallow, ResNet50, and InceptionV4. Achieved a MAE of 10 months using InceptionV4. Preprocessing involved CLAHE filtering and channel reduction, and utilized Google MediaPipe for hand detection and cropping. (*Skills: CNN, Deep Learning, TensorFlow, NumPy, Computer Vision, Python*)
- **Grayscale to RGB Image using GAN:** Built and fine tuned a GAN model for image colorization. Achieved realistic results using Python and TensorFlow. (*Skills: GANs, Deep Learning, TensorFlow*)
- **Human Voice Gender Detector:** Built a deep learning model to recognize gender and age from real-time speech using TensorFlow and RNN/CNN with accuracy of 84% in development. (*Skills: Time Series, Deep Learning, Machine Learning, TensorFlow, Python*)
- **Weather Classification:** Architected a weather classification model using CNNs with TensorFlow, integrating diverse weather datasets reaching accuracy of 99.9%. (*Skills: CNN, TensorFlow, Python*)
- **A.I. Supply Chain Management:** Devised an AI-based system for supply chain optimization using heuristic algorithms and C#. (*Skills: AI, C#, Optimization*)
- **3D Data Processing:** Implemented the SGM algorithm in C++ for dense disparity maps from stereo images using OpenCV. Evaluated accuracy with MSE. (*Skills: OpenCV, C++, Computer Vision*)
- **Robot Operating System (ROS) Project:** Initiated intelligent robotic applications using ROS and C++ for Tiago robot simulations, focusing on navigation and control. (*Skills: C++, ROS, Linux*)
- **Few-View Object Reconstruction:** Created a reconstruction model with unknown categories and camera poses using OpenCV. (*Skills: 3D Data Processing, OpenCV*)
- **Image Segmentation:** Designed an interactive image segmentation tool using OpenCV in C++ for real-time image and video processing. (*Skills: OpenCV, C++, Image Processing, Computer Vision*)
- **A.I. Algorithm Development:** Maze, Tower of Hanoi, Knight's Tour, 8 Puzzle, 2048, and Navigation systems. (*Skills: A.I., Algorithm Design, Python, Optimization*)

## Education

- **Università degli Studi di Padova**  
Master of Engineering (MEng), Computer Engineering - Artificial Intelligence *Sep 2022 - Present*  
*Skills:* Machine Learning, Deep Learning, Computer Vision, AI.
- **Azad University (IAU)**  
Bachelor of Engineering (BE), Computer Software Engineering *Sep 2015 - Feb 2019*  
*Skills:* OOP, .NET, C#, A.I., Java — *Activities:* Teaching Assistant, Quantum computers
- **Tehran Institute of Technology**  
Engineer's Degree, Microcontroller *Oct 2012 - Jun 2015*  
*Skills:* IoT, ARM Architecture, AVR — *Activities:* AVR/ARM programming in C and Assembly
- **Students' Science and Research Institute**  
Computer Programming Course *Oct 2010 - Jun 2013*  
*Skills:* OOP, C, C++, C#, Java — *Activities:* RoboCup Programming Competitions

## Certifications

- **Python for Machine Learning** *Nov 2021*
- **Machine Learning from Basic to Advanced** *Oct 2021*
- **Artificial Intelligence (AI) in the classroom** *Oct 2021*
- **Cutting-Edge AI: Deep Reinforcement Learning in Python** *Sep 2021*
- **Learn Machine learning & AI (Including 3 Projects)** *Aug 2021*
- **C# Console and Windows Forms Development - LINQ & ADO.NET** *Jul 2021*