

# Mohammad Raziei



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## OVERVIEW

I'm Mohammad Raziei, passionate about Data Science, Image Processing, Natural Language Processing, and Signal Processing. With studies in Communication Systems, Computer Engineering at Polytechnic of Tehran, and Biomedical Engineering at Sharif University, I specialize in Backend Development, algorithm implementation, Parallelism, and HPC. Additionally, I have hands-on experience in MRI scanner image reconstruction. Outside of work, I continue to expand my expertise and interests through continuous learning. I excel at collaborative problem-solving, communication, and learning new technologies, and I aim to leverage this well-rounded skillset and track record of shipped products to impact business objectives through innovative conversational solutions meaningfully.

## EDUCATION

🎓 **Sharif University of Technology** Tehran, Iran  
*M.Sc. in Biomedical Engineering - Electrical Engineering Department* 2019 – 2022

↪ **Thesis Title:** *Undersampled MRI Image Reconstruction.*

**Explanation:** This dissertation was successfully defended in early 2022 with a very good grade. Subsequently, it was selected by the university as a confidential project for up to 5 years to complete the work related to the article and its patent registration.

🎓 **Amirkabir University of Technology** Tehran, Iran  
*B.Sc. in Software Engineering - Computer Engineering Department* 2017 – 2020

↪ **Explanation:** Due to having excellent conditions resulting from my undergraduate GPA and ranking in the national university entrance exam (461), I pursued further studies in the field of computer science in addition to electrical engineering, through the University's Elite Talents Foundation.

🎓 **Amirkabir University of Technology** Tehran, Iran  
*B.Sc. in Communication Systems - Electrical Engineering Department* 2015 – 2019

↪ **Thesis Title:** *Reinforcement Learning based Algorithm to Control Autonomous vehicles.*

**Award:** This dissertation achieved the top rank in the industry at the end of 2019. This event was held with the evaluation of a panel of electrical professors and industry judges.

## SOME SCORES

### Master

Graph Signal Processing (GSP)	20	Compressed Sensing (CS)	18.3
Parallel Programming	20	Medical Image Analysis and Processing (MIAP)	18
Deep Learning	20	Blind Source Separation (BSS)	17.6
Medical Imaging	18.5	Adaptive Filter	17

### Bachelor

Digital Signal Processing (DSP)	20	Signals & Systems	18.42
Computing Programming	20	Foundation of Matrix and Linear Algebra	18.8
Logic Circuits	20	Computer Architecture & Microprocessors	20
Electromagnetics	20	Computer Networks	17.2
Advanced Programming (AP)	19.19	Communication Systems	17.25

## TECHNICAL SKILLS

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- Data Science** : Machine Learning, Deep Learning, Reinforcement Learning, NLP, Graph Neural Networks, Image Processing, Signal Processing
- Signal Processing:** Classic Communication Signal Processing, AI-based Signal Processing, Automatic Modulation Recognition (AMR), EEG / stereo-EEG Processing for Imaginary Speech Recognition
- Languages** : Python, C++, Cuda, Matlab, JavaScript
- Programming** : Design Patterns, Test-driven Development, Microservices architecture, Package Developing, CPython Binding, Clean Architecture
- devops** : git, CI/CD, gitlab-ci, github actions, template repo

## SELECTIVE EXPERIENCES

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- Hamrah Avval - MCINEXT** Feb 2022 – present  
*Data Scientist - Senior Python and C++ developer* Tehran, Iran  
The company's main goal is to achieve the digital dream and implement an internal search engine. Our team, named document analysis, is responsible for analyzing pages, extracting features, analyzing site SEO, rendering JavaScript pages, and estimating page quality.  
**Key skills:** Qt, C++, Boost, CPython, Cython, Python, Document Analysis, Parsing & rendering HTML, NLP, Machine Learning, DevOps, docker, kubernetes, search engine optimization(SEO) features
- Sunyar Company** Jan 2021 – Nov 2020  
*Lead of AI and Software Engineering* Tehran, Iran  
This company, located in Pardis Technology Park, works in the field of telecommunications and software. In this team, I was the team lead of the programming group. The company's projects were in the telecommunications and software domains, including projects in artificial intelligence, which involved five members. The projects included tasks such as Automatic Modulation Recognition (AMR) and monitoring. Additionally, projects in High-Performance Computing were carried out using CUDA for parallelization.  
**Key skills:** Qt, C++, Matlab, Python, Signal Processing, Communication, Modulation Recognition, monitoring, CUDA
- SSIG Company** May 2018 – Nov 2020  
*Member of Signal Processing & Software Department* Tehran, Iran  
In this company, I interviewed for the software team but ended up working in the signal processing team. After a month, I worked as a member of both teams. The software team consisted of 12 members, and the communication signal processing team consisted of 8 members. Initially, in the signal processing team, we analyzed the mentioned signals and implemented various algorithms in MATLAB. Then, as a MATLAB translator to C++, I implemented these algorithms in the signal processing software, which was written in Qt.  
Some of the libraries and technologies used in the software team include:  
**Key skills:** Matlab, Signal Processing, Communication, C++, Qt, Boost, GNU Radio, ALGLIB, Armadillo, Eigen, libigl
- Amirkabir Parsian Robotics** Mar 2016 – Des 2016  
*Member of AI Team* Tehran, Iran  
During the second semester of my bachelor's degree, I was invited to join the Robotics team of the *Amirkabir Parsian Robotics* Department due to my grades in the first semester. I started working in the AI team. The Parsian Robotics team was working on football robots and had various teams. The team's area of activity was implementing control algorithms for team control using C++ language and qt 4.8 framework.  
**Key skills:** C++, AI, Algorithms, Qt, Robotics

## HOBBIES

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- Reading, Solving Rubik, Listening to Music, Watching Movies, Going on a Trip, Playing Multiplayer game