Amirhossein MAHDINEJAD
Algorithm Engineering Student | Computer Programming Instructor

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It is my pleasure to be a teacher sometimes, a student always, and a perpetual learner. The goal of my research is to either invent novel algorithms or optimize existing ones that solve complex problems. My areas of interest include **Recommender Systems**, **Optimization algorithms**, and **Algorithmic Data Analysis**.

🎓 EDUCATION

09/2016 - 09/2020 **University of Guilan**, Faculty of Engineering, Rasht, Iran.
B.Sc in Computer Engineering
> All Semesters CGPA : *16.26/20*
> Last Semester GPA : *19.11/20*
> Bachelor's Project : *Automatic extraction of metadata from scientific papers with Python*

09/2012 - 06/2016 **Allamehelli5 High School**, Affiliated with the National Organization for the Development of Exceptional Talents (NODET), Tehran, Iran.
Diploma in Physics and Mathematics Discipline
> Secondary School GPA : *19.01/20*
> Pre-University Final Grade : *18.19/20*

💼 WORK AND TEACHING EXPERIENCES

Present
May.2023 | Part-time Remote, GAMERTAG.APP, Malta
　　Back End Engineer
　　　　Develop and maintain backend services using AWS, Implement GraphQL APIs for scalable data access, and Collaborate within a Scrum environment, contributing to sprint planning and daily standups.
　　AWS | Serverless | GraphQL | Typescript | CI/CD

May.2023
Feb.2023 | Full-time, MYDIGIPAY, Tehran
　　Test Engineer
　　　　As part of my responsibilities at MyDigipay, a financial service used within the DigiKala group, I am tasked with performing API testing and automation using Postman.
　　API testing | JavaScript | Data-driven testing | CI/CD | NoSQL databases

Dec.2023
Apr.2022 | Part-time, UNIVERSITY OF TEHRAN, Tehran
　　- **Recommender-Systems Researcher** *(Mar.2022 - Present)*
　　　　Working on Hybrid algorithms based on matrix factorization in recommender systems
　　- **Applied Machine Learning Teacher Assistant** *(Spring 2022)*
　　　　Mentoring students on how to use relevant Python packages
　　Python | Evolutionary Algorithms | Recommender Systems | Linear Algebra

Jan.2023
Aug.2018 | Part-time, NATIONAL ORGANIZATION FOR DEVELOPMENT OF EXCEPTIONAL TALENTS (SAMPAD), Tehran
　　- **Django Developer** *(Oct.2019 - Sep.2022)*
　　　　Cooperating on the project stated in the projects section, `allamehelli5.ir`
　　- **Computer Programming Teacher** *(Aug.2018 - Jan.2023)*
　　　　An introduction to algorithmic thinking and programming
　　- **Combinatorics Teacher** *(Jan.2022 - Sep.2022)*
　　　　Fundamental concepts in combinatorics and probability
　　- **Vice Chancellor for Research and Innovation** *(Sep.2019 - Jun.2022)*
　　　　Encouraging students to develop an awareness of their area of interest and preparing them for relevant competitions, organizing monthly seminars with expert speakers on subjects such as data science, bioinformatics, etc, and holding skill development workshops for interested students were my most significant responsibilities.
　　C++ | Python | JavaScript | SQL databases | Problemsetting | Leadership | Teamwork

Sep.2020 Aug.2019	Part-time, RAYKA SOFTWARE CONSULTING, Rasht **Python Developer** As a data annotator, I began this experience. Later, I worked with a team of developers on a project requiring natural language processing. `Python` `NLP` `Data Annotation`

Jul.2022 Sep.2017	Part-time, UNIVERSITY OF GUILAN, Rasht - **Formal Languages and Automata Theory Teacher Assistant** *(Spring 2022)* - **Artificial Intelligence and Expert Systems Teacher Assistant** *(Fall 2019)* This course's project was developed using Prolog, a logic programming language - **Basics of Computational Intelligence Teacher Assistant** *(Fall 2018)* NumPy and Pandas were among the Python packages used to implement the course's tasks - **Data Structures and Algorithms Teacher Assistant** *(Fall 2018, Fall 2019, Fall 2020)* - **Advanced Programming Teacher Assistant** *(Spring 2018, Spring 2019)* Students in this course used Java to complete object-oriented assignments - **Discrete Mathematics Teacher Assistant** *(Spring 2018)* - **Fundamentals of Programming Teacher Assistant** *(Fall 2017, Fall 2018, Fall 2019)* In this course, C++ was the primary language used `Object-Oriented Programming` `Algorithm Development` `Problemsetting` `Collaboration` `Debugging`

🖥 PROJECTS

ALLAMEHELLI5 WEBSITE   OCT.2019 - SEP.2022

🖧 github.com/TheMn/internet-engineering-project   🗗 allamehelli5.ir

This project was inspired by the internet engineering course at the University of Guilan and was later used for educational purposes for high school students. For nearly two years, I was the project's back-end developer and site manager. During the spread of Covid-19, we added online teaching tools including Adobe Connect and Moodle plugins to this website.

`Python (Django)` `Bootstrap` `SQLite`

FEATURE SELECTION USING SIMULATED ANNEALING   JAN.2022 - FEB.2022

🖧 github.com/TheMn/Feature-Selection-using-Simulated-Annealing

My task in this project was to choose a subset of the most effective features from a heart disease dataset of 11 characteristics using a Simulated annealing approach for optimization and then predict using certain supervised learning algorithms such as SVM.

`Python` `Evolutionary Algorithms` `Machine Learning`

💡 ACHIEVEMENTS

Winner	**The 4th Sharif Spaghetti Contest** *(Team : Vazin-Tamiz-Manzel)*
8th Place	**The 2019 ICPC Asia Tehran Regional Contest** *(Team : estefaadeye abzaari)* The quota for the University of Guilan for next year's competition has been raised from one team to three teams as a result of our outstanding performance.

🌐 LANGUAGES

- **English**, IELTS Overall Score 6.5
- **Persian**, Native
- **Italian**, Elementary

➕ VOLUNTEERING EXPERIENCES

- **Executive Director**, the 2019 University of Guilan Programming Contest
- **Hosting and Oratory**, the 2019 University of Guilan Engineering Graduation Ceremony

▤ COMPETENCES

My background as a problem solver and developer enables me to construct applications in most programming languages by following tutorials and documentation. I can especially identify the following skills as my strengths :

PYTHON	I use the most common libraries for ML algorithms and the Django framework for back-end web applications.
MODERN JS	Using Google Apps Script, I've created several applications that interact with G Suite tools.
C/C++	Whenever I am participating in coding competitions or teaching my students, it is my most preferable language.

Throughout my academic and professional experiences, I learned and used certain key computer engineering abilities, of which I will name a few :

GIT	I'm familiar with software version control systems and maintain a number of GitHub repositories.
LINUX	In Kubuntu, my favorite Ubuntu-based Linux distribution, I learned various terminal commands.
LaTeX	This CV, as well as the majority of my academic assignments and papers, are written in LaTeX.