

# Hassan Ardeshir

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## EDUCATION

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### B.Sc. in Computer Science

GPA: 17.8/20

### Diploma in Mathematics and Physics

GPA: 20/20 (Helli operated by National Organization for Development of Exceptional Talents.)

University of Tehran, Iran

Sep 2019 – Present

Helli High School, Iran

Sep 2013 – Jun 2019

## RESEARCH INTERESTS

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- High-performance computing
- Embedded & real-time systems
- Computer networks

## RELEVANT COURSEWORK

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- Computer Programming (A+, 20/20)
- Computer Science and Programming (A+, 19/20)
- Advanced Programming (A+, 19.25/20)
- Data Structures and Algorithms (A, 17.82/20)
- Design and Analysis of Algorithms (A+, 20/20)
- Principals of Computer Systems (A, 17.41/20)
- Operating Systems (A+, 18.75/20)
- Fundamentals of Software Design (A, 17.75/20)
- Database Management Systems (A, 17.5/20)
- Bio-Computing (A+, 19.72/20)
- Graph Theory and Applications (A+, 20/20)
- Artificial Intelligence (A+, 18.6/20)

## RESEARCH PUBLICATIONS

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### Sleep Stage Classification Using a Pre-trained Deep Learning Model

*Undergraduate Thesis, Supervisor: Prof. Bagher Babaali*

🏠 ARXIV

Summer 2023

- The project introduced a method for sleep stage classification by transforming EEG signals into spectrograms.
- Utilized pre-trained deep learning models and GPUs for efficient EEG spectrogram processing.
- This method demonstrated superior performance compared to other techniques used in the field.
- The research is accessible on ARXIV, allowing the wider community to benefit from this innovative approach.

## TEACHING EXPERIENCE

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### Teaching Assistant

*Provided academic support through remote and in-person guidance, and clarifying complex topics*

🏠 Web page

- Basic Programming – Prof. Abbas Nowzari Dallini
- Advanced Programming – Prof. Abbas Nowzari Dallini

Fall 2021

Winter 2022

## SELECTED WORK EXPERIENCE

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### Upwork.com

*Freelancer*

🏠 Web page

Jun 2023 – Present

- I took on diverse projects in Node.js, Python, Unity, NLP, and PHP.
- These experiences fueled my skills and passion for growth and collaboration.

### Monti

*Team Leader, Full-stack Developer*

May 2021 – Jun 2023

- Led a team to create a dynamic data-processing website.
- Mastered C#, TypeScript, HTML, CSS, and more.
- Expertly administered VPS for optimal performance.
- Effectively managed Microsoft SQL Server for robust data handling and storage.

### Sooring Asset Management

*Python Django Developer*

Sep 2021 – May 2022

- Collaborated with a dynamic team to develop a Python-based bot trading system in Django.
- Processed and stored data in Redis and PostgreSQL databases, extracting valuable insights.
- Employed Celery and spiders to enhance the bot's capabilities, enriching the project.
- Tackled challenges in real-time data reception, socket-based data retrieval, data analysis, and order management.

## SELECTED PROJECTS

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### Server Management with Slurm | High-performance computing

[🏠 Web page](#)

- Efficiently managed university servers for academic and research activities using Slurm, a powerful workload manager and job scheduler, on Linux server infrastructure. *Tech: Slurm, Linux server*

### Django House Rental Management System | Software Design

[🔗 Link to code](#)

- A Django web app featuring user authentication, profile management, house listings, and offer-making functionalities. *Tech: Django, Python, HTML, CSS, Bootstrap, Utilizing Diagram Drawing Principles*

### Unity Population Simulator Against COVID-19 | Unity Developer

[📺 Link to video](#)

- Experience the interactive Unity Population Simulator Against COVID-19, where 500 island inhabitants navigate the virus's spread. *Tech: Unity, Adobe Premiere, Adobe Photoshop.*

### Employee Management System | Full-stack Developer

[🏠 Web page](#)

- Built an Employee-City Management System with dynamic DIV generation and drag-and-drop functionality, powered by PHP and MySQL for the backend. *Tech: PHP, MySQL, Bootstrap.*

### Reinforcement Q-Learning for Solving Flagged Maze | Artificial Intelligence

[🔗 Link to code](#)

- Explored reinforcement learning concepts such as model state determination, state reduction techniques, and the influence of learning rate ( $\alpha$ ) and discount factor ( $\gamma$ ) on decision-making and convergence. *Tech: Python, Numpy*

### Designing CPU From Scratch | Principals of Computer Systems

[🔗 Link to code](#)

- Implemented a computer architecture based on Morris Mano's 'Computer System Architecture' using Logisim, a digital logic simulator, with program execution capabilities. *Tech: Logisim*

## AWARDS & ACHIEVEMENTS

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### Earn the rise talent badge

Upwork

- Reserved for those who've consistently excelled from day one.

Summer 2023

### Direct Admission to Computer Science Master's Program

University of Tehran

- Have an opportunity to continue M.Sc. at the University of Tehran without an entrance exam.

Spring 2023

### Academic Achievement and Ranking

University of Tehran

- Top 5% Ranking Among 66 Students in the School of Computer Science.

2019 – 2023

### Awarded Undergraduate Tuition Fee Waiver

National Scholarship

- Ranked in Top 0.2% (among 164,000 students) in the competitive national university entrance exam.

Summer 2019

### Member of National Organization for Exceptional Talents

Helli High School

- Highly selective and top-tier school with entrance exam.

2013 – 2019

## CERTIFICATES

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### Coding Framework Certificate

Summer 2023 - [🔗 CodeSignal report](#)

Powered by CodeSignal

## SKILLS

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**Programming:** Python, C++, C#, TypeScript, and PHP

**Server Management:** Linux Distributions, SQL Server, Docker, VPS, Nginx, Apache, and Network protocols

**Web Development:** Django, Flask, C# ASP.NET, Node.js, Bootstrap, Redis, JQuery, and WordPress

**Python Tools:** Jupyter Notebook, Numpy, Pandas, Tensorflow [GPU], Celery, Selenium, Keras, PIP, and Conda

**Special Skills:** Git, Adobe Photoshop, Adobe Premiere, Unity, UE4/5, VR/AR/Leap Motion, 3Ds Max, Content Creator, System Hardware Configuration and Server Setup

## LANGUAGES

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• **Persian:** Native

• **English:** Fluent