

Yair Mahfud

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Education

The Hebrew University of Jerusalem

B.Sc. in Computer Science, GPA: 84

Jerusalem, Israel

Expected Graduation: Mar 2026

- **Relevant Coursework:** Data Structures, Algorithms, Operating Systems (C++), OOP (Java), Machine Learning, CP Architecture.

Relevant Technical Courses & Projects

Intern-Sheep – Internship Aggregation Platform

- Developed a job aggregator that scrapes and indexes job positions from platforms such as RemoteOK and WeWorkRemotely and more using Python and BeautifulSoup/Selenium.
- Engineered a tag-based filtering system to extract relevant listings (e.g., “student”, “software”, “intern”) and structured results into daily updates for CSV export.
- Designed the backend to support multithreading and smart caching, improving crawl efficiency and preventing redundant requests.
- Built with scalability in mind; currently integrates multiple job sources with plans for expansion and automation of alerts.

IML (Introduction to Machine Learning)

- Hands on projects I took in Introduction to Machine Learning course at HUJI.
- Implemented Linear Regression, Decision Trees, Clustering, Supervised and Unsupervised learning.
- Implemented using Python, NumPy, scikit-learn, pandas.

NAND to Tetris

- Built compiler and CPU architecture from logic gates to operating system using Python
- Implemented a complete compiler and computer architecture, starting from basic logic gates and progressing to a functional CPU.
- Developed key components, including an assembler, virtual machine, and simplified operating system, with a focus on text processing using Python.

Operating Systems

- Created a Thread and Process Control system using mutex/semaphores in C++
- Reduced resource contention by 40% by designing multithreaded control with deadlock prevention. Implemented a Thread and Process Control system utilizing memory usage, mutex and semaphore to allow usage of Threads and Processes in a way that avoids starvation and deadlocks. Implemented in C++.

Experience

Hebrew University

Chief Security Officer

Jerusalem, Israel

2023 - Present

- Lead campus security operations and team coordination in high-responsibility environments.
- Managed crisis scenarios, ensuring student and faculty safety while balancing operational efficiency.

IDF Combat Engineering 603rd Battalion

Combat Commander & First Sergeant

Israel

2017 – 2020

- Led high-stakes field missions, supervised team safety, built fortifications, and removed obstacles.
- Trained new recruits and managed readiness under combat conditions.

Leadership & Activities

Israeli Victims of War (IVOW), Canada

Counselor

Ottawa, Canada

Jul 2020 – Aug 2022

- Supported and led activities for 100 children, victims of terror, in a 5-week summer camp.

Hasdei Liel Charity Foundation, Israel

Counselor

Netanya, Israel

2020 – Present

- Participated in donation drives and distribution of essential goods to low-income families.

Skills & Interests

Technical: Python, C++, C, Java, SQL, JavaScript, Linux/Unix Scripting, Version Control (Git/GitHub), Agile/Scrum/Sprints, Data Structures & Algorithms, Quantitative Analysis

Languages: Hebrew (Native), English (Fluent)

Interests: Machine Learning, Scalable Systems, Problem Solving, Backend Development/Backend Engineering, Cloud Computing, APIs