MEHDI ATMANI

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EDUCATION

Brown University, *rising sophomore*   *Providence, RI*
- **Double degree B.Sc. Computer Science & A.B. Applied Math to Financial Economics**   *May 2027*

  Relevant Coursework: Introduction to OOP and Computer Science, Data Structures and Algorithms, Calc III, Honors Linear Algebra Proofs and Theory, ODEs, Statistical Inference, Intermediate Microeconomics.
  Upcoming semester: Graphs and Networks, Foundations of AI, Introduction to Software Engineering.
- **GPA: 3.90/4.00**

Eastern Mediterranean International School, *International Baccalaureate*   *Tel Aviv, Israel*
- **IB score: 41/45 (top 5% worldwide)** Relevant Coursework: Computer Science and Economics (higher level)   *May 2023*

TECHNICAL EXPERIENCE

Brown Space Engineering   *Providence, RI*
Ground SWE team member   *September 2023 - present*
- Co designing and implementing on site software to manage and use data received from our cube satellite (NASA launch 2025).
- Contributed in a team of 3 to the development of a **control interface to show all satellite telemetry in React JS.**
- Planning next steps to build an interface for users to interact with the cubesat - part of a broader project.

RevisionDojo   *Remote*
Intern Software Engineer   *May 2023 - September 2023*
- Contributed to the **implementation of an embedded AI** to interact with educational content and students.
- Developed **HTML**, **CSS**, and **JS** experience while editing web platforms.
- Participated in the expansion of the International Baccalaureate division, identifying usability bugs, and building documentation.

FIRST Robotics Team Code: Java   *Tel Aviv, Israel*
Founder and captain   *September 2021 - March 2023*
- Implemented the **4th best performing computer vision for the Israeli national FIRST championship.**
- Developed **PID controller** for autonomous path error correction.
- **Recruited and trained over 15 members** in software development and mechanical engineering.
- Fundraised 4,000 dollars after sudden loss of funding and sharp rise in piece import cost.

CODING PROJECTS

Decision Tree Generator: Python   *Providence, RI*
- Designed and implemented a **Python** project to take a data set and **produce a Binary Decision Tree.**   *March 2024*
- Achieved 85% accuracy in a complete testing suite with poisonous mushroom classification, including over 20 characteristics and 2,000 entries. Developed an edge case and unit testing suite for the entire program.

Schedule builder: Java   *Providence, RI*
- Designed and implemented a **Java** project to create a working teaching schedule for my CS course.   *February 2024*
- Developed to take as data input both matrices or Graphs for extensibility purposes.
- **Breadth First Search algorithm (BFS)** was used to achieve lowest runtime in shortest path computation.
- Extensive use of targeted data structures to minimize space and time complexities, Hashset, Hashmap, Arraylist, and LinkedList.
- Developed and passed a complete testing suite with over **40 unit tests** using the **JUnit library.**

Game Center App: Java   *Providence, RI*
- Developed graphical desktop **Othello, Doodle Jump, Tetris, and Snake games using JavaFX.**   *December 2023*
- Implemented **Weighted Minimax Algorithm** for AI computer player with soon expected **Alpha Beta Tuning.**
- Implemented thorough in-text documentation with complete association diagrams.

Teamwork Desktop App: Java   *Tel Aviv, Israel*
- Designed and implemented a Java app to find, manage, and create study groups at the school's library.   *June 2022-May 2023*
- Implemented **Gmail API** for app-to-student communication and student-to-student texting.
- Unique **Java Swing** interface for each student account, fetching school calendar for room availability.
- Instrumented through a local database managed in **SQLite**.

LEADERSHIP EXPERIENCES

Oasis Project,   *Tel Aviv, Israel*
Head of the Budget Department & Participant   **2021 - 2023**
- Key member in the engineering development and construction of our machine to extract water from air.
- Co-designed budget allocation for first prototype with PhD Robert Roach.
- **Awarded the international Zayed Sustainability Prize, including a $100,000 fund.**

Charney Resolution Center (CRC)   *Tel Aviv, Israel*
Certified Mediator   **2021 - 2023**
- Sponsored for a **30+ hours course in meditation** with a leading Israeli formation company Gome Gevin.
- Facilitated peace simulations in Jerusalem. Leading Junior Mediator for international boarding school with over 200 students.

Planet Khmissa   *Morocco & Oversees*
Board member   **2013 - present**
- Key Achievement: **Official Patronage of His Majesty the King Mohammed VI** to represent Morocco and its cultures globally.
- Traveled and lived with my family in a motorhome for four years as we were traveling in Western Europe and South America while homeschooled with a Spanish online educational system.
- Met and **organized +10 cross-cultural exchanges** with mayors, ambassadors, and educational institutions of countries traveled to.

ADDITIONAL

Programming languages: Java, Python, HTML, CSS, JS, SQLite, Bash/Shell, MatLab, Latex.

Languages: Native **French**, Fluent **Spanish**, Fluent **English**, Proficient **Moroccan**, Elementary Proficiency **Arabic.**

Publications: A research paper in **Huffman & LZW** compression algorithms. Abstract and paper on LinkedIn

Noteworthy Skills: Machine Learning, Recommender Systems, Database Management, REST APIs, Web Scraping, Pandas, Numpy.

Mehdi Atmani