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EDUCATION

Brown University

Providence, RI | September 2023 – May 2027

B.Sc. in Computer Science, B.Sc. in Applied Mathematics *GPA: 4.0/4.0*

Relevant Courses: Software Engineering, Data Structures & Algorithms, Machine Learning, Computer Systems, Deep Learning, Linear Algebra

The National Center for the Distinguished (STEM Magnet High School) *GPA: 100/100*

Latakia, Syria | June 2022

EXPERIENCE

Rhode Island Hospital, AI Research Assistant

Providence, RI | May 2025 – Present

- Selected for Brown's **Undergraduate Teaching and Research Award (UTRA)** to support AI research at **Rhode Island Hospital**.
- Developing NLP models for **clinical text de-identification**, filtering PHI from unstructured records to ensure HIPAA-compliant data use.
- Designing an **Early Warning System** that flags at-risk patients by comparing symptoms and lab results against 50K+ historical records spanning over 50 years.
- Working closely with clinicians to define system requirements and lead **agile development cycles** aligned with real-world clinical workflows.

Computer Science Department at Brown, Head Teaching Assistant

Providence, RI | February 2025 – Present

- Appointed Head TA for Brown's core AI course from a pool of **60+ applicants**; led hiring, training, and mentoring course staff.
- Drove the development of assignments, autograders, and instructional content for **200+ students** to ensure clarity, rigor, and fair evaluation.
- Led weekly 2-hour lab sections and provided direct support through debugging and conceptual guidance during office hours.

Computer Science Department at Brown, Research Assistant

Providence, RI | November 2024 – May 2025

- Researched **Inverse Multiagent Learning**, modeling Spanish electricity markets as stochastic Fisher markets to infer agent behavior.
- Achieved **2.02x** lower mean squared error (MSE) compared to the ARIMA method, significantly boosting prediction accuracy.

HousingWorks RI, Data Analyst and Research Intern

Providence, RI | February 2024 – August 2024

- Automated data scraping, processing, and visualization workflows using Python and R on U.S. Census datasets, cutting manual work by **70%** and surfacing trends in housing affordability across RI municipalities.
- Analyzed zoning policies and synthesized findings for the **2024 Housing Fact Book**, a statewide resource shaping public policy and guiding decisions by investors and housing advocates.

PROJECTS

Bruno's Compass (Ongoing project) | Java, TypeScript, React, HTML, CSS, JUnit

Ongoing

- Building a web platform for **1000+ international students** at Brown to streamline access to housing, healthcare, and academic support.
- Embedding an AI chatbot using **LangChain**, trained on curated Brown-specific content; projected to serve **300+ students weekly** and cut wait times for answers by **80%**.

Multi-Agent Framework for Go Gameplay | Python

September – December 2024

- Programmed a suite of AI agents for the game of Go, including Monte Carlo Tree Search (MCTS), Q-learning, and deep learning models for value and policy learning, achieving an ELO rating of **1700**.
- Won a class-wide Go agent tournament, outperforming **65+** participants by using a hybrid approach with an agent combining MCTS, Q-learning, and Alpha-Beta pruning.

Fullstack Vocabulary Tracker Web App | TypeScript, Firebase, Next.js, Playwright, Clerk

January – February 2024

- Designed Vocablo, an AI-powered language learning web app using React, TypeScript, and Java, enabling **100+** Spanish learners at Brown to track vocabulary progress and identify gaps by automatically categorizing words into thematic clusters.
- Implemented flashcards and integrated AI-powered testing to reinforce learned vocabulary and track user progress.

Compact Operating System | C, C++, Git

February – March 2024

- Architected a C-based OS with process spawning, virtual memory, and key system calls (`fork()`, `sys_page_alloc()`).
- Coded page table logic and memory management routines to enable kernel-driven allocation and secure address space isolation.

EXTRACURRICULARS

Syria Script, Volunteer TA

Virtual | August 2024 – Present

- Co-authored the curriculum for northern Syria's first refugee coding bootcamp, reaching **100+ students** with no prior CS background.
- Facilitated weekly virtual sessions for **20+ learners**, reinforcing core programming concepts and providing one-on-one project support.

Bonner Community Fellowship, Bonner Fellow

Providence, RI | Sept 2023 – Present

- Chosen as one of **20 fellows** for a competitive **4-year** program supporting community-driven initiatives in social justice and education.
- Tutored underrepresented high schoolers via Google's IgniteCS, dedicating **3+ hours/week** to expand CS access in Providence.

Full Stack at Brown, Lead Software Engineer

Providence, RI | October 2023 – Present

- Onboarded and mentored new members, guiding them through project workflows, best practices, and technical stacks.
- Delivered and launched custom websites and internal tools for **10+** Brown and RISD organizations, improving user engagement.

SKILLS, INTERESTS & AWARDS

Technical Skills: Python, Java, C/C++, JavaScript, HTML/CSS, R, Racket, SQL, React, TypeScript, Playwright, Firebase, Next.js, Docker

Languages: English (Fluent), Arabic (Native), French (Intermediate) **Interests:** AI Policy, Linguistics, Social Impact Tech, Music, Kayaking

Awards: National Valedictorian of Syria (Ranked #1 out of **40,000** graduates nationwide), Honorable Mention in the International Physics Olympiad, Honorable Mention in the International Mathematical Modeling Challenge