

# Ahmad Isa Alsafwah

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## EDUCATION

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### Boston University

Bachelor of Arts in Computer Science

Boston, MA

Dean's list, GPA: 3.72, Sep. 2022 – May 2025

## EXPERIENCE

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### Software Engineer Intern

Peoria Investments

Winter 2025

Chicago, IL

- Developed scripts to ingest, clean, and process property listings and market data from multiple sources for the firm's internal investment analysis platform.
- Designed and implemented automation tools that eliminated manual spreadsheet workflows, reducing property evaluation time by 35%.
- Built reusable data pipelines and Excel-export modules that enabled the investment team to run portfolio stress tests and market-comps reports in minutes.

### Full-Stack Software Engineer Intern

Questrom School of Business, BU

May 2024 – May 2025

Boston, MA

- Engineered and deployed a two-sided online marketplace platform (like Amazon seller-buyer markets) used in behavioral-economics experiments with **4,000+ users** & **LLM-based** agentic AI sellers to study pricing, quality, and warranty decisions in digital markets using React, Node.js, JavaScript.
- Refactored backend logic to support multiple products per producer, replacing single-product assumptions; redesigned data models and implemented an interactive slider for dynamic product configuration.
- Shipped bi-weekly production builds tested by 100+ users in behavioral economics labs, using feedback cycles to iterate on UI flow and backend logic.

## PROJECTS

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### MeowPlay (E-Commerce Site) | Javascript, Express, Node.js, MongoDB

Sep 2023

- Developed a full-stack e-commerce platform for cat products, implementing product listings, shopping cart, and secure checkout features.
- Integrated OAuth and MongoDB to securely manage user accounts, products, and orders.
- Utilized Node.js and Express for server-side logic, ensuring robust backend functionality.

### Latent Semantic Analysis Search Engine | Python, Flask, scikit-learn, NLP

Spring 2025

- Built a real-time semantic search engine over 18,000+ documents using TF-IDF vectorization and Latent Semantic Analysis.
- Reduced term-document matrix dimensionality by 90% using Truncated SVD, improving query speed by 40%.
- Implemented cosine similarity ranking to retrieve top 5 most semantically relevant results for each user query.
- Integrated Flask backend with HTML/JS frontend for responsive user interaction and real-time result delivery under 200ms latency.

### Multi-threaded Image Processing Server | C, POSIX Threads, Concurrency

Fall 2024

- Engineered a multithreaded C server that handles image transformations (rotate, blur, sharpen, edge detection) in FIFO order over TCP/IP.
- Utilized POSIX threads and semaphores for synchronization, enabling concurrency control, robust queue management, and safe resource sharing.
- Implemented configurable worker threads, queue-size limits, and detailed per-request timestamp logging for enhanced scalability and performance.

## TECHNICAL SKILLS

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**Programming:** Python, Java, C, Bash, JavaScript, TypeScript, Assembly, HTML/CSS

**Frameworks/Tools:** React, TailwindCSS, Next.js, Express.js, Node.js, EJS, SQL, MongoDB, Shadcn, Bootstrap, Bulma, Railway, Git/Github, NumPy, Figma, Empirica, Google Cloud

**Relevant Coursework:** Software Engineering, Full Stack Development, Algorithms, Database Systems, Design of Programming Languages, Embedded Systems, Information Security, Agile Methodology/Development

**Languages:** English, Arabic, Spanish