

ALA ALAWDI

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EDUCATION

University of California, Santa Cruz – B.S. Computer Science (Expected 2027)

Relevant Coursework: Computer Systems, Assembly Language, Discrete Mathematics, Data Structures and Algorithms, Object-Oriented Programming

Chabot College – Associate Degree in Mathematics | GPA: 3.5

TECHNICAL SKILLS

Languages: C++, Python, JavaScript, Assembly (MIPS, x86, RISC-V), HTML/CSS

Systems: Linux (Ubuntu), Memory Management, Low-Level Programming

Concepts: Graph Algorithms (BFS), OOP, Data Structures, Algorithm Complexity ($O(V+E)$)

Tools: Git, GitHub, VS Code, Jupyter Notebook

PROJECTS

- Designed and developed a modular web-based algorithmic applications platform (HTML, CSS, JavaScript).
- Integrated arbitrary-precision Big Number Calculator (ported from C++ to JavaScript) supporting extremely large computations (e.g., 2000!).
- Implemented graph-based Flight Route Finder using Breadth-First Search ($O(V+E)$) with dynamic user interaction.
- Built typing placement system measuring WPM and accuracy with real-time classification.
- Developed an AI Assistant bot to guide users through the platform and improve navigation experience.

Mini Key-Value Storage Engine (C++)

Implemented an in-memory key-value storage system using hash tables and custom memory management; supported CRUD operations with $O(1)$ average-case lookup performance.

WORK EXPERIENCE

Math Tutor – Chabot College (2023–2024)

Provided academic tutoring support in mathematics and computer science courses.

Retail Operations Assistant – Grocery Store, Oakland, CA (2023)

Supported daily store operations and inventory coordination.

DoorDash Driver (2022)

INTERESTS

Artificial Intelligence, Backend Systems, Performance Optimization