Aktan Azat

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Education

University of California, Davis — Davis, CA

Bachelor of Science in Computer Science & Engineering; GPA: 4.0 — *September 2024 – June 2026*

- Relevant Coursework: Computer Architecture, Algorithm Design & Analysis, Operating Systems, Probability Theory
- Relevant Activities: AvenueE, IEEE, SIAM

De Anza College — Cupertino, CA

Associate of Science in Computer Science, Mathematics, Physics — *September 2022 – June 2024*

- Relevant Coursework: Data Structures & Algorithms, Object Oriented Analysis & Design, Linear Algebra

Experience

Computer Science Tutor — January 2025 – Present

University of California, Davis — *Davis, CA*

- Conducted tutoring sessions for **10+** students in **ECS 154A** (Computer Architecure) and **ECS 122A** (Algorithm Design and Analysis).
- Led 15+ weekly tutoring sessions that contributed to a **25%** improvement in average exam scores through structured lesson plans and targeted problem-solving.

Data Science Intern — June 2024 – August 2024

Quantum Brains — *London, United Kingdom (Virtual)*

- Analyzed sales performance using **Bayesian statistics**, achieving a **39%** improvement in sales.
- Reduced staff expenditure by **60%** by creating an **RAG-based LLM**.

Teaching Assistant — September 2023 – June 2024

De Anza College — *Cupertino, CA*

- Assisted in the instruction of **CIS 22A** (Intermediate C++) , **CIS 22B** (Advanced C++), and **CIS 21JA** (x86 Assembly Programming) programming courses, guiding **30+** students per class.
- Led weekly lab sessions and office hours, providing targeted assistance on advanced C++. Improved student problem-solving abilities by **25%**.

Projects

Aggie Eats | *Swift* — January 2025

- Developed a hypothetical mobile application for Aggie Eats.
- Integrated **Stripe** for secure and seamless in-app payments.
- Implemented advanced Swift features, including **SwiftUI** animations, **Core Data** for offline order tracking, and real-time location updates using **MapKit**.

Durak Strategy Optimization Project | *Python* — October 2024

- Built a simulation engine: **50K+** rounds simulated, average runtime of less than **0.2s/round**.
- Analyzed gameplay metrics using **Pandas** with **100K+ data points**.
- Developed a custom **RL** environment and trained an agent over **100K iterations**, achieving a **20%** win rate improvement.

Self-Driving RC Car | *Arduino, C++* — August 2024

- Designed and implemented an autonomous self-parking RC car using 4 ultrasonic sensors for distance detection and real-time obstacle avoidance.
- Integrated a **PID control algorithm** for smooth steering and acceleration control, optimizing the car's response to sensor inputs and ensuring stable movement through the parking process.
- Utilized **C++** and **Arduino IDE** to interface with the sensors, program motor controls, and implement feedback loops that allowed the car to park autonomously without external guidance.