

Arya Sadeghi
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Education

University of California- Santa Barbara *Graduation Date: June 2028*
Bachelor of Science (B.S.) in Computer Science | GPA: 3.86/4.00

- **Relevant Coursework:** Data Structures & Algorithms, Linear Algebra, Discrete Mathematics, Probability & Statistics

Experience

Software & IT Support Simi Valley, CA
June 2025 – Sep 2025
SimiCare Medical Group

- Rebuilt the clinic website into a modern responsive layout, increasing engagement by ~25% and reducing IT tickets through a troubleshooting guide.
- Automated patient reminder and follow-up workflows (Python + SMTP), saving staff ~3-4 hours per week.

Software Engineering Intern Los Angeles, CA
June 2023 – Aug 2023
Mammoth Media

- Shipped front-end features for a high-traffic media platform and refactored JavaScript components to improve responsiveness.
- Collaborated within a 15-person engineering team, contributing to code reviews, sprint cycles, and iterative feature releases.

Research

Undergraduate Research – ERSP | UCSB Sep 2025 – Present

- Studying EF1/EFX fair-division on graph-structured indivisible goods; analyzing existence and tractability conditions and prototyping DP-based baselines on bounded-degree graphs.
- Implementing EF1 allocation procedures and generating benchmark datasets across randomized graph families; conducting literature review to guide conjectures and experimental design.

Projects

Clinical Decision Support Multi-Agent System Nov 2025

- Built a clinical decision-support system using a five-agent LLM pipeline with strict JSON-schema and guideline validation (CDC/NICE/ADA) to prevent unsafe treatment outputs.
- Deployed a FastAPI backend (normalization, med-set expansion, guideline filtering, contraindication checks, citation generation) on AWS EC2 with Docker, and a React/TypeScript frontend on S3 + CloudFront.
- Integrated Supabase for real-time condition/diagnosis storage and ensured deterministic end-to-end routing with robust validation layers.

NBA Fantasy Draft Optimization Tool Sep 2025

- Built a fantasy draft optimizer analyzing five seasons of NBA data (~3k rows) to generate real-time draft recommendations.
- Improved prediction accuracy by ~30% using regression models and Monte Carlo simulations across 1,100 player-seasons.
- Developed an end-to-end ML pipeline (cleaning, feature engineering, modeling, simulation) and deployed via a Flask API with a React UI.

Leadership & Extracurricular Activities

Project C.A.R.E | UCSB Oct 2025 - Present

- Leading full-stack redevelopment of Project C.A.R.E's platform (React + Tailwind), automating content workflows and adding analytics dashboards to guide outreach.

Robotics Team | UCSB Jan 2025 - Present

- Optimized autonomous control code, reducing latency by 30–50 ms and improving autonomous scoring ~15%.

Skills

Languages: C++, Python, JavaScript/TypeScript, Java, SQL

Technologies/Frameworks: React, FastAPI/Flask, NumPy/Pandas/scikit-learn, Docker, Git, Matplotlib, Supabase