

Aadit Agarwal

+1 858-319-6037 | aaadit242@gmail.com | [linkedin/in/agarwalaadit](https://www.linkedin.com/in/agarwalaadit) | San Diego, CA

EDUCATION

University of California, San Diego

Sep 2021 – Jun 2025

B.S. Mathematics & Computer Science, Data Science Minor

- Relevant Coursework: Object-Oriented Programming, Data Structures and Algorithms, Computer Architecture, Computer Vision, Discrete Mathematics, Software Engineering, Web Development

WORK EXPERIENCE

Halicioğlu Data Science Institute

Jan 2025 – Present

Instructional Assistant

- Lead weekly review sessions for 50+ students, designing practice materials and providing guidance on complex coursework.
- Collaborate with professor to evaluate 300-student assessments and implement data-driven improvement.

Vistas Global

Jul 2024 – Sep 2024

Software Engineer Intern

- Developed a SaaS Asset Management application using ASP.NET MVC, C#, MySQL, and RESTful APIs.
- Enhanced user experience by designing UI/UX in Figma, incorporating feedback and requirements from stakeholders.
- Independently managed the full Software Development Life Cycle, from gathering requirements to final deployment.
- Designed and implemented a Java Android application for real-time barcode scanning.
- Deployed the application using IIS and implemented a CI/CD pipeline, ensuring seamless updates and deployment.

STEMz Learning (Non-Profit)

Jan 2024 – Aug 2024

Backend Software Engineer Intern

- Built and tested a recommendation system that delivers personalized and curated content suggestions.
- Designed and deployed a scalable backend infrastructure using AWS, capable of handling 1,000+ concurrent users.
- Developed a secure user authentication system, ensuring data privacy of over 750 students enrolled.
- Collaborated with cross-functional teams to integrate the backend with the frontend.

SkyIT Services

Feb 2024 – May 2024

Frontend Developer Intern

- Analyzed user research and feedback from product managers, resulting in the implementation of 5 new features.
- Optimized React components for real-time data visualization dashboards, improving rendering time.
- Integrated RESTful APIs and implemented state management using Redux, ensuring efficient data flow.

Association for Computing Machinery

Jun 2023 – Aug 2023

Backend Software Developer

- Collaborated with a team of 6 developers to develop a MERN stack web application to track their carbon footprint by allowing users to input groceries and monitoring their expiration dates, while following agile methodology.
- Implemented RESTful APIs for efficient data retrieval, and designed MongoDB schemas for optimized query performance.
- Utilized Postman for API testing and validation, and wrote unit tests to maintain the reliability of the backend server.

PROJECTS

Automated Apartment Hunter

Present

- Building a web scraping service using Python to concurrently scrape rental listings from multiple real estate websites.
- Developed FastAPI backend with PostgreSQL, implementing geospatial queries for location-based listing search and filtering.
- Optimizing system performance by implementing token bucket rate limiting with Redis, connection pooling.

Network Packet Sniffer

Present

- Implementing a C++ packet sniffer that captures and analyzes IP, TCP/UDP, HTTP, and DNS traffic in real-time.
- Developed customizable network traffic filtering, statistics generation, and payload inspection features.
- Designed modular architecture for easy protocol extension, adhering to OOP principles.

Predictive Modeling for User Engagement Forecasting

Jun 2024

- Developed machine learning models for predicting user engagement using Python, scikit-learn, and TensorFlow.
- Constructed a Data Clean Room for secure CTR model training and encrypted data collaboration.

TECHNICAL SKILLS

Languages: Java, C/C++, C#, HTML, CSS, JavaScript, SQL, PHP, Bash, Python, .NET, MATLAB

Frameworks: Django, NumPy, Matplotlib, SciPy, Node.js, Express.js, React.js, Next.js, Angular.js, TensorFlow

Developer Tools: Git, MongoDB, Gitlab CI/CD, MySQL, PostgreSQL, Apache, Azure, Docker, Kubernetes, IIS