SATVIK SRIRAM

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Education

University of California, San Diego – B.S. Computer Science   **Graduated: June 2025**
                                                                          Overall GPA: 3.94/4.00

Professional Experience

Cohort Lead/Teaching Assistant   ***Berkeley Coding Academy***   **Date: 2023 - Present**
- Designed and delivered structured machine learning course materials while collaborating with a team of 5+ tutors to administer course materials to students of various skill levels.
- Simplified complex concepts in machine learning, data processing, and neural networks enabling students aged 10+ to grasp foundational principles and apply them to practical projects.
- Provided personalized 1-1 sessions, developing custom lesson plans to 6+ students based on individual needs.

Software Engineer Intern   ***BlueCloak***   **Date: 2021**
- Worked with a team of 7 interns and 20+ current employees to construct a company-assigned project.
- Engineered a real-time internet traffic generator to simulate realistic data transfers between users and data servers to prepare for possible cyber-attacks.
- Utilized Python with NLTK and SpaCy integration to simulate realistic internet sessions with artificial users.
- Optimized code through BFS searching and added user-based interest prediction through semantic learning.

Projects

[Pokemon TCG Price Scanner](#)   **Date: 2025 - Present**
- Engineered a full-stack real-time Pokémon card price retrieval app using React, FastAPI, WebSockets, and TensorFlow for live detection, matching, and pricing from webcam input.
- Deployed a custom-trained YOLO-based segmentation model that achieved 99.9% precision with OpenCV and NumPy for efficient in-frame card detection, perspective correction, and visual annotation in live video streams.
- Implemented a server-side price caching system (TTLCache) and RESTful API powered by FastAPI to enable low-latency batch price lookups from the Pokémon TCG API; reducing API load by 70% and response latency by 60%.
- Built a scalable WebSocket backend in Python for real-time frame ingestion and model inference, with frontend integration in React/Vite for smooth user experience across devices with a detection-to-price delay of 100ms

[TFTeams](#)   **Date: 2025**
- Designed a full-stack web application using React, Node.js, Express, and Riot Games API, enabling 1,000+ Teamfight Tactics players to retrieve and visualize real-time game stats.
- Deployed a secure proxy server with Express.js and Axios to streamline data aggregation from Riot Games' RESTful API, reducing latency by 40% through optimized API requests.
- Enhanced application reliability by handling error codes and edge cases achieving a 100% success rate in API data retrieval during testing with 100+ simulated user inputs.

[Root Journal](#)   **Date: 2024**
- Led a team of 10 developers in creating a journaling web application using Agile methodologies and 10-day sprints.
- Detailed timelines, design sketches, and wireframes through Miro and Figma while planning meetings and goals.
- Utilized Quilljs in order to have built-in document editing features such as text size, font, color, and bullet lists.
- Leveraged CSS and JavaScript to visually animate the growth of a root over a year with low performance impact while storing 1,000s of journal entries per user.

[Stock Market Predictions Based on News Headlines](#)   **Date: 2024**
- Worked with a team of 6 AI engineers and data scientists to conduct a study on AI's ability to predict stock market fluctuations based on news headlines.
- Capitalized on the NLTK library to preprocess thousands of news headlines and transform them into word embeddings.
- Applied PyTorch by modifying the existing transformer encoder and utilizing optimizers and learning rate decay.
- Resulted in a 74.3% training accuracy and a 61.5% testing accuracy.

Technical Skills

Coding Languages: Java, Python, C, C++, HTML, CSS, JavaScript, TypeScript, SQL, Unix, Bash and Shell Scripting

Libraries: React, Node.js, Vite, Scikit-learn, TensorFlow, OpenCV, PyTorch, keras, Matplotlib, NLTK, Selenium, Puppeteer

Tools: Git/Github, Retrium, Miro, Figma, CI/CD, Postman

Certifications

AWS Certified Cloud Practitioner | Amazon Web Services (AWS) | Sept 2024