

RAHUL THENNARASU

🌐 US Citizen

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Education

California Polytechnic State University-San Luis Obispo

2025 – 2028

Bachelor of Science - BS, Computer Science

San Luis Obispo, CA

Experience

Software Engineer Intern

July 2024 – August 2024

airah.ai

Cupertino, CA

- Built scalable Flask backend with MongoDB for healthcare AI chatbot, implementing RAG pipeline with PDF text extraction, document chunking, and semantic search using Google text-embedding-004 embeddings
- Developed retrieval system using cosine similarity on document embeddings to provide contextually relevant medical information to Gemini LLM, with MongoDB caching layer reducing query response times
- Implemented JWT authentication for personalized Gemini chat sessions and created K-means clustering analysis on question embeddings, collaborating with Stanford oncologists on patient interaction optimization

Software & Hardware Development

Feb. 2025

MakerHacks - Awarded Best Use of AI

San Francisco, CA

- Engineered autonomous wildfire rescue rover using ESP32 microcontroller, thermal sensors, and radar for real-time obstacle detection in hazardous environments
- Developed dual-architecture system with Python control algorithms and C++ embedded firmware, achieving 92% navigation accuracy in smoke-obscured terrain
- Integrated AI-powered path optimization and emergency detection using sensor fusion, enabling autonomous victim location and rescue coordination

Software Development

Feb. 2025

Hackabyte - Awarded 2nd Overall

Sunnyvale, CA

- Built Veritas, a real-time fact-checking platform using Flask backend with MongoDB and Google Gemini AI for automated claim verification
- Implemented structured analysis system achieving accurate identification of false claims with integrated Google Search API for evidence sourcing
- Developed full-stack chat interface with React frontend, enabling users to verify statements and track analysis history in real-time

Software Development

Mar. 2024

MateoHacks - Awarded Best Solo Hack

San Mateo, CA

- Built software with 95% real-time object recognition accuracy for visually impaired users using ResNet-50 and KNN
- Created OpenCV pipeline with edge detection and OCR, achieving 90% accuracy for object identification and text-to-speech
- Won Best Solo Hack out of 88+ teams by integrating Google Cloud Speech API for visual-to-audio conversion

Software Development

Feb. 2024

PioneerHacks - Awarded 1st Overall

Sunnyvale, CA

- Built real-time ASL-to-text translation system supporting accessibility for deaf and hard-of-hearing users
- Achieved 96% gesture classification accuracy across 200+ signs using MediaPipe hand tracking and custom neural networks

Projects

Cinder | Founder & Software Engineer

Jun 2025 – Present

- Founded Cinder, an open-source ML model analysis platform supporting PyTorch, TensorFlow, and scikit-learn with full-stack React/Node.js architecture
- Published on PyPI (`pip install cinder-ml`) and deployed at cinder.digital, enabling developers to easily integrate model evaluation tools
- Built ML debugging suite including SHAP feature importance, cross-validation, and hyperparameter tuning to streamline model development workflows

Technical Skills

Languages: Python, Java, C++, JavaScript, TypeScript, SQL, PostgreSQL, MongoDB, Git, Linux, Docker

Technologies: LLMs, ML, RAG, Docker, AWS, Azure, Django, Flask, FastAPI, React, Next.js