

# Amit Karthikeyan

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## EDUCATION

### University of California, Santa Barbara

Bachelor of Science in Computer Science, Minor in Statistical Science

Santa Barbara, CA

Expected Grad Date: June 2027

GPA: 3.73 — Dean's List

Relevant Coursework: Data Structures & Algorithms, Object Oriented Design, Probability & Statistics

## SKILLS

Languages: Python, SQL, Java, C/C++, TypeScript/JavaScript, Golang, HTML/CSS

Frameworks and Libraries: React, Node.js, Express.js, FastAPI, Flask, PyTorch, NumPy, Pandas, Matplotlib

Tools: Git, GitHub, AWS, Google Cloud, Linux/Unix, Jira, Docker, Excel, CI/CD

Databases: PostgreSQL, Pinecone, Firebase Firestore, DynamoDB, Redis

## EXPERIENCE

### AutoInvent

Jul 2025 – Present

Founding Software Engineer

Remote

- Architected an NLP driven RAG pipeline using Google Gemini, Hugging Face Transformers, and vector embeddings to automate legal claim generation, processing unstructured text inputs with < 2 seconds latency
- Developed a scalable React 18 + Vite front-end with real-time document updates and responsive UI
- Engineered a multi-tenant data layer using Firestore and Cloud KMS, enforcing row-level security policies to ensure strict data isolation for legal compliance

## PROJECTS

### Mapache | Golang, Python, Docker, React, TypeScript

Sep 2024 - Present

- Designed a real-time ingestion service in Go handling 2,000+ events/s with <250ms end-to-end latency
- Implemented a ClickHouse schema optimized for time-series data, no observed data loss across 10M+ messages
- Built a NumPy-vectorized CAN-bus decoder in Python, reducing parsing CPU overhead by 30%

### SignalBench | Python, PostgreSQL, Redis, React

Nov 2025 – Jan 2026

- Benchmarked logistic regression, gradient boosting, and neural baselines with ROC-AUC and calibration analysis
- Stored experiments, configurations, and evaluation metrics in a relational SQL database with PostgreSQL
- Implemented Redis-backed caching and rate limiting to reduce external data fetches and protect training endpoints

### Factify | GCP, React, JavaScript, HTML/CSS

Jun 2025 – Dec 2025

- Shipped a Chrome extension in JavaScript with 1k+ downloads that fact-checks social media content across X, Instagram, and Facebook using Google Gemini, processing 250+ posts daily
- Optimized API performance by 85% through intelligent request batching, using combined analysis techniques
- Cut LLM token usage by 60–80% with prompt engineering, strict length caps, and structured JSON output
- Integrated Stripe subscriptions and webhooks to enforce tiered usage limits and automate billing events

### SlipStream | JavaScript, Jira, HTML, Forge

Nov 2025 – Dec 2025

- Built an Atlassian Forge app that ingests Confluence comments, maps them to the correct Jira issue, and posts a formatted Jira comment that preserves the original author attribution for end-to-end traceability
- Implemented secure metadata storage and event-driven processing to sync Confluence and Jira in real time

## LEADERSHIP

### Gaucho Racing - Formula SAE

Sep 2024 - Present

Data Science Lead

Santa Barbara, CA

- Led end-to-end telemetry analytics for the UCSB Formula SAE team with over 20 members
- Built Python/SQL pipelines and ClickHouse dashboards to model lap time, driver performance, and reliability
- Created collaboratively in a SCRUM environment and delivered data-driven race-strategy recommendations