ADITHYA MONISH KUMAR K

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SUMMARY

Full-stack and AI enthusiast with experience in building scalable web, mobile, and distributed applications and integrating AI models to them.

TECHNICAL SKILLS

Languages: Go, TypeScript, JavaScript, Python, Java, C/C++, Dart, SQL, HTML, CSS
Frameworks & Libraries: React, Next.js, Node.js, Express, Flutter, Tailwind CSS, Framer Motion, Zustand
AI & Machine Learning: PyTorch, LightGBM, Transformers, SentenceTransformers, Deep Learning, Computer Vision
Cloud, DB & Tools: AWS (IAM, Cloud Architecture), Docker, Kafka, Redis, PostgreSQL, MySQL, MongoDB, Supabase, Git
Concepts: Distributed Systems, REST API, SSE, DSA, DAA, OOP, DBMS, COA, Network Security, Cybersecurity

EXPERIENCE

Amrita Automotive Research and Technology Centre (AARTC)   Oct 2025 – Present
Research Intern   *Coimbatore, India*
- Conducted research as part of the perception team on a BEV-based autonomous driving system.
- Worked on BEV and model training, including dataset preparation and training pipeline refinement.

Sony SSUP   Jan 2025 – Sep 2025
Product Intern   *Coimbatore, India*
- Developed AgroESP Mobile App offering real-time and historical data monitoring of the Polyhouse.
- Integrated SSE for real-time sensor data, image updates, and chart rendering.
- Developed query and graph pages; implemented responsive UI and live updates for data/image feeds.
- Deployed application to Google Play Store (Testing phase).

PROJECTS

Distributed Search & Analytics Platform   2025
Go, PostgreSQL, Kafka, Redis, Docker, Next.js 14
- Engineered a production-grade distributed full-text search engine from scratch in Go, implementing custom inverted indexing, BM25 ranking algorithms, and database sharding.
- Built an API gateway with auth/rate limiting and an analytics pipeline, utilizing Redis for caching to ensure high performance and full observability.

LifeLeveler   2025
React, TypeScript, Vite, Tailwind CSS, Supabase, Node.js
- A gamified life management app transforming daily tasks into an RPG adventure.

Secure-Digital-Key-Asset-Checkout-System   2025
TypeScript, React, Node.js, Security
- Developed a full-stack web application for securely managing physical and digital asset checkout with enterprise-grade security features.

Learn-and-Exchange-Platform   2025
TypeScript, React, Node.js, Real-time Updates
- An end-to-end web application for learning, bartering skills, and collaborating through tasks, offers, chat, reviews, and support tickets.
- Built with a modern TypeScript stack and implemented real-time updates for seamless user interaction.

Persona-Driven-Document-Intelligence-Engine   2025
Python, SentenceTransformers, LightGBM
- Built a semantic matching engine that ranks PDF sections for specific user personas using fine-tuned SentenceTransformer and cosine similarity scoring.
- Designed a multi-stage relevance scoring framework combining title similarity, content embeddings, and subsection summarization.

CERTIFICATIONS

AWS Academy Graduate - AWS Academy Cloud Foundations Certification
Google Cybersecurity Specialization Certificate - Including 8 other Course Certifications.
Google AI Essentials Certification

EDUCATION

Bachelor of Technology in Computer Science and Engineering   Aug 2023 – July 2027
Amrita Vishwa Vidyapeetham, Coimbatore
- CGPA: 7.59 (3rd Year)