Kaushik Sathyanath Singh

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Saarbrücken, Saarland, Germany

Experience

Associate Software Engineer (AI) April 2024 – Sept 2025
Synergech Technologies India Private Limited *Tamil Nadu, India*

- Built an AI-driven Document Extraction system for Notices, Invoices, and Insurance Quotes using Azure Cognitive Services and Azure OpenAI, achieving 95% accuracy and reducing processing time by 60%
- Implemented RLHF-inspired feedback mechanism with Azure Functions to fine-tune extraction prompts, improving accuracy from 85% to 95%
- Created 5+ intelligent automation workflows using Azure OpenAI and Azure Functions, improving operational efficiency by 40% and reducing manual effort by 70%
- Engineered a serverless question paper generator with Azure Functions and Azure Cognitive Services featuring syllabus alignment that reduced creation time from 2 hours to 15 minutes, adopted by 3+ educational institutions
- Collaborated with cross-functional teams to gather requirements, design cloud-native solutions on Azure, and deploy production-grade AI systems

Full Stack Developer Intern Jan 2023 – Mar 2023
Ernst & Young LLP *Bangalore, India*

- Developed a full-stack property damage assessment application using React and Node.js with real-time Chart.js visualizations for insurance claims, enabling adjusters to analyze damage patterns and expedite decisions
- Improved codebase maintainability by 15% through modular React component architecture with hooks, reusable UI components, and consistent design patterns across the application
- Optimized application performance by 10% by implementing server-side pagination for large datasets, lazy loading for image-heavy reports, and efficient caching mechanisms
- Implemented JWT-based authentication and role-based authorization with secure session management, enhancing security by 15% and ensuring proper access control for adjusters, supervisors, and administrators

Projects

Engram | *Next.js, Supabase, AI SDK, Gemini, PostgreSQL* Jan 2026 – Present

- Built an AI-powered study platform grounded in active recall and spaced repetition to improve long-term knowledge retention
- Implemented automatic flashcard generation from highlighted study material using LLM-based content distillation
- Designed a daily recall workflow that prioritizes revision topics based on forgetting curves and user performance
- Developed real-time AI explanations and simplifications using AI SDK to help users deeply understand complex concepts
- Integrated Supabase for authentication, user progress tracking, streaks, and persistent learning history
- Created a knowledge graph-style visualization to connect concepts and reinforce conceptual understanding

DashMind | *TypeScript, React, Node.js, PostgreSQL, LangChain, OpenAI, Docker* Jan 2025 – Feb 2025

- Developed a full-stack application that automatically generates interactive dashboards from databases, documents, and APIs using natural language queries
- Integrated OpenAI and LangChain to interpret user intent and dynamically translate it into SQL queries and data-processing pipelines
- Built a responsive React-based dashboard interface with real-time chart and table visualizations using Chart.js and D3.js
- Implemented multi-source data integration supporting PostgreSQL databases and RESTful API endpoints
- Containerized the application with Docker for consistent deployment across environments

Education

Saarland University
Masters in Data Science and Artificial Intelligence *Oct 2025 – Present*

Panimalar Engineering College
Bachelors in Computer Science and Engineering *Apr 2020 – May 2024*

Awards and Certificates

Winner, Smart India Hackathon 2022 (AICTE) – Part of the team to develop innovative solution among 10,000+ participants
2nd Runner-Up, PEC Techathon 1.0 (Cognizant) 2023 – Built full-stack application under 24-hour time constraint

Technical Skills

Languages: Java, Python, TypeScript, JavaScript, HTML/CSS, R
Frontend: React, Next.js, Angular, Chart.js, D3.js, Tailwind CSS
Backend: Node.js, FastAPI, Django, .NET, Express.js
Databases: SQL, PostgreSQL, Neo4j, Chroma
AI/ML: NumPy, Pandas, LangChain, LangGraph, LlamaIndex, PyTorch, TensorFlow, HuggingFace, OpenAI API, RAG, AI Agents, MCP
Tools & Technologies:: Git, Docker, Azure, GCP, REST APIs, CI/CD, Agile/Scrum

Languages

English: Professional Proficiency
German: Elementary Proficiency