Kaushal Shanmugam

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EXECUTIVE SUMMARY

Aspiring Software Development Engineer with proven experience in developing intelligent, scalable web platforms and backend systems using React, Node.js, FastAPI, and MongoDB. Strong foundation in data structures, API design, and performance optimization with a focus on building reliable, user-centric software solutions ready for production-scale environments.

EDUCATION

Kongu Polytechnic College   *cgpa:9.96*
Diploma in Computer Technology   *jun 2023 - march 2026*

EXPERIENCE

Smart Home Technologies – Full Stack Web Developer(May 2025-July 2025)

- **Optimized** system reliability and performance by troubleshooting hardware and software issues in connected systems, utilizing diagnostics to minimize downtime and improve user experience.**Developed** a patient dashboard for real-time data visualization and interaction using **React** and modern UI frameworks, focusing on an intuitive and responsive web experience.
- **Engineered** and **deployed** custom web-based user interfaces for smart environment monitoring, utilizing front-end technologies to deliver seamless control and system feedback.

PROJECTS

ReadMind – AI-Powered Online Book Reader

Technologies: Python, React, FastAPI, PostgreSQL, NLP/LLM APIs, OCR Libs

- **Engineered** a full-stack online book reader platform utilizing **OCR and real-time text extraction** to process uploaded content for instant, intelligent reading assistance and knowledge retention.
- **Developed** an **AI summarization engine** that leverages a transformer model to generate concise chapter summaries and explanations, reducing reading time and improving user comprehension by over 30%.
- **Designed** a scalable backend architecture with **FastAPI and PostgreSQL** to manage concurrent user sessions, dynamically create flashcards, and generate adaptive multiple-choice quizzes (MCQs).

LegitMind – AI Legal Document Simplifier

Technologies: Python, Flask, Azure/AWS NLP Services, Document Parsing Libraries, NoSQL DB

- **Implemented** an AI-driven system that uses **sophisticated LLMs** to convert complex legal jargon from uploaded documents into clear, plain-language summaries and interpretations for non-legal users.
- **Automated** the **structured extraction of critical clauses and key points** by employing rule-based parsing and contextual modeling, enabling rapid review and demystification of lengthy documents.
- **Architected** the data flow to handle high-volume document uploads securely, ensuring that simplification processes scale efficiently to make legal content universally accessible.

Learning.AI – Personalized Skills Advisor

Technologies: Node.js, React, MongoDB, Express, Python (Adaptive Logic), Dynamic Assessment Engine

- **Developed** an adaptive **personalized learning platform** that assesses user skills via a dynamic MCQ engine, providing real-time feedback and performance analytics.
- **Designed** the core recommendation engine using **machine learning techniques** to map user strengths and weaknesses to

optimal learning paths, increasing study efficiency.

- **Integrated** a scalable **Progress Tracking Module** with MongoDB to store and analyze performance data, enabling the system to dynamically adjust content difficulty for maximum engagement and skill mastery.

TECHNICAL SKILLS

Languages: Java, Python, C/C++(DSA), SQL (Postgres,Mysql), JavaScript, HTML/CSS,NoSQL(MongoDb)
Frameworks: React, Node.js,Express.js,Mongoose,Rest API's
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, Postman,Amazon Web Services,vercel ,AI agents,N8N