

# SABITHA PAULRAJ

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## Education

### Saveetha Engineering College

Nov. 2022 – May 2026

*B.E Computer Science and Engineering | CGPA: 9.2*

*Chennai, TN*

**Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Database Management Systems, Computer Networks, Software Engineering, Object Oriented Programming, Full Stack Web Development using MERN, Applied Natural Language Processing.

### The Velammal International School

2021 – 2022

*Higher Secondary | 95.6%*

*Chennai, TN*

### Velammal Vidhyashram, Surapet

2019 – 2020

*High School | 96.2%*

*Chennai, TN*

## Work Experience

### BMW Group, India

Oct 2024 – Mar 2025

*Data Analyst Intern*

*Mahendra WC, TN*

- Automated backend workflows processing over 1M records using Python, SQL, and VBA, reducing manual workload and latency by 60%.
- Optimized RDBMS via query tuning and schema design, improving retrieval speed and data accuracy.
- Designed and deployed internal tools and dashboards used by teams across 6+ BMW plants worldwide (e.g, Thailand, Brazil, Egypt, Indonesia, Malaysia, Vietnam), boosting project tracking, compliance, and collaboration.
- Built custom features for production progress tracking, developed an AI powered Document Versioning tool saving 10+ hrs of manual documenting, collaborated with global stakeholders to deliver scalable tools across departments.

## Projects

### AlphaGraph | *React.js, SpringBoot, FastAPI, MongoDB, NLP based AI Pipeline*

- Built a dashboard for financial news analytics with an AI pipeline that orchestrates summarization, sentiment analysis, entity recognition, and stock impact scoring from live articles ,social media and and third-party APIs (Alpha Vantage, Finnhub) using NLP.
- Built front-end in React.js with Tailwind CSS, featuring company sentiments, trend analytics, and manual article analysis tools.
- Integrated backend with FastAPI, MongoDB, and third-party APIs (Alpha Vantage, Finnhub) for storage, stock data, and scalable AI processing. Aimed at generating alpha and insights for retail and institutional investors using NLP and stock impact scoring.

### JusticeBot | *RAG, FAISS, Gemini Pro, LangChain, Vercel*

- Built a RAG-based legal assistant for legal and financial compliance automation and retrieval using LangChain to deliver context-aware, citation-backed legal responses powered by Google's Gemini Pro model.
- Parsed legal PDFs and unstructured text using PyMuPDF and custom extractors to build a structured knowledge base embedded into a FAISS vector database for fast, semantic retrieval.
- Deployed on Vercel using a modular, serverless setup for scalable, low-latency legal query resolution.

## Technical Skills

**Programming Languages:** Java, Python, C, JavaScript, TypeScript, SQL, C++, HTML5, CSS3.

**AI/ML:** Deep Learning, Neural Networks, Natural Language Processing, Transformers, Generative AI, LLMs, RAG, LangChain, PyTorch, TensorFlow, Prompt Engineering.

**Full-Stack Development:** React.js, Next.js, Node.js, Express.js, Flask, Spring Boot, MySQL, MongoDB, SQLite, PostgreSQL, RESTful APIs.

**Tools:** AWS, Google Cloud Platform, Azure, Git, GitHub, VS Code, IntelliJ, Jupyter Notebook, Google Colab.

## Achievements & Positions of Responsibility

- 1st Place – IBM Z Datathon Global Hackathon (Chennai, In-Person), 2023
- 1st Place – Datatrix 24hr Datathon at Guvi (SRMIST), 2024
- Joint Secretary - Machine Learning Community, Tech Society, 2024 - Present