

# Midhun Chakkaravarthy K

Portfolio  - LinkedIn  - GitHub 

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## EXPERIENCE

- YokoStyles

Full Stack Developer Consultant (Freelance)

Remote  
April 2025 – Present

  - Parametric Pattern Export System:** Engineered comprehensive conversion mechanisms using Python and Flask to transform GarmentCode-generated parametric sewing patterns into 4 industry-standard formats (**SVG, PNG, PDF, DXF**). Implemented robust file processing pipelines achieving **99.5%** accuracy in pattern geometry translation, enabling seamless manufacturing integration.
  - 3D Garment Integration & Visualization Pipeline:** Integrated Meshcapade API using Python to render parametric garment patterns in 3 dimensional space. Constructed **NiceGUI**-based user interface for real-time visualization and data transformation logic to process GarmentCode pattern outputs with body measurement parameters for made-to-measure garment creation.
  - Microservices Architecture for Pattern Processing:** Architected and written 3 independent **Flask-based microservices using Python** for handling parametric pattern conversion workflows and multi-format export processes. Successfully refactored monolithic pattern processing components into scalable microservices architecture, improving system maintainability and deployment flexibility.
- Sayvai Software

Full Stack Developer Consultant (Freelance)

Remote  
June 2024 – March 2025

  - Voicebot Configuration Dashboard:** Developed a client-facing dashboard to configure **3 core functionalities: Speech-to-Text (STT), Text-to-Speech (TTS), and Large Language Model (LLM) settings**. Incorporated **Livekit** for real-time communication via **WebRTC**, enabling low-latency audio streaming for seamless voice interactions.
  - Custom Model Creation & Multiple Agent Configuration:** Designed and deployed the dashboard which has features to create custom voice agents. Utilized **Supabase, SQLAlchemy, and Alembic** for efficient database management and schema migrations, enabling clients to manage and scale their voice agents effortlessly.
  - CMS Platform Development:** Built a custom CMS platform from scratch using **React.js and FastAPI**, enabling users to create and manage websites. Integrated the proprietary Voicebot and Chatbot models into the CMS, enabling clients to embed and configure these models directly into their websites. Leveraged **Supabase** for real-time database updates and streamlined content management.
- Smartail Private Limited

Project Engineer Intern

Chennai, India  
December 2023 – May 2024

  - Admin Portal & Initial Configuration:** Restructured and enhanced the admin portal, serving as the entry point for the application. This configuration setup manages **70+ schools and 65,000+ students**, enabling schools to configure critical details such as classes, subjects, syllabi, and publications. Built new components and APIs using **Angular (frontend) and Java Spring Boot (backend)**, ensuring seamless navigation and functionality for school administrators.
  - Full-Stack Development & Bug Fixes:** Worked on both **frontend (Angular) and backend (Java Spring Boot, Python Flask)** to implement new features, optimize performance, and resolve bugs. Delivered **10+ new UI components**, enhancing user experience. Utilized **Docker for containerization and Kafka for real-time data streaming**, improving system reliability and scalability.
  - Production Release Leadership:** Led a major production deployment, coordinating with the development team to roll out new features, improve stability, and resolve critical issues. **Successfully managed the release process**, ensuring a smooth transition to the live environment for all 70+ schools and their users.
- Smartail Private Limited

Project Engineer Intern

Chennai, India  
June 2022 – December 2022

  - Image Extraction Mechanism:** Worked on a frontend image extraction mechanism for 2 types of questions: subjective and objective, streamlining the extraction process. Added **MathLive Keyboard and KaTeX** for rendering mathematical equations, enabling accurate extraction and display of math questions from images.
  - UI Development & API Integration:** Designed and implemented various UI components and complete pages using **Angular**. Created and integrated multiple APIs with **Java Spring Boot** backend to ensure seamless data flow and functionality between the frontend and backend systems.
  - Bug Fixes & Enhancements:** Identified and **resolved 30+ UI and functionality-related bugs**, improving the overall user experience. Optimized existing features for better performance and stability, ensuring a smooth and reliable application.

## SKILLS SUMMARY

- Languages:** C, Java, Python, JavaScript, TypeScript, SQL.
- Frameworks:** Angular, React, Next.js, Node.js, Express, Spring Boot, Flask, FastAPI, Tailwind CSS.
- Databases:** MongoDB, PostgreSQL, MySQL, Supabase.
- Tools:** AWS, Kubernetes, Git, Docker, SQLAlchemy, Alembic, Livekit, Kafka.
- Core:** Data Structures and Algorithms, Object-Oriented Programming, Operating Systems.

## EDUCATION

- Coimbatore Institute of Technology

Master of Science in Software Systems, Cumulative GPA: 8.43/10

Coimbatore, India  
July 2019 – May 2024