

ACADEMIC PROJECTS

Jadoo.ai : AI- Driven Image Tagging and Description (Link) Dec 2024

- Integrated **Vertex API** to generate **context-rich image descriptions** for enhanced accessibility and searchability.
- Developed a **Next.js frontend**, incorporating **Framer Motion animations** for a seamless user experience.
- Optimized **image retrieval** using **pgVector embeddings**, achieving a 76% faster search performance.
- Integrated **Vision Transformers** from **Hugging Face** with **Google Cloud Vision** for advanced image analysis.

BizragBot : RAG Chatbot for Predictive Analysis of Business Data (Link) Oct 2024

- Built a **RAG pipeline** for LLM-based query answering with **Llama 3.2 1B Instruct**.
- Integrated **LangChain** for efficient document chunking & retrieval workflows.
- Implemented **Semantic Search** with **FAISS** for fast document retrieval.
- Optimized inference speed using **OpenVINO & AVX-512 ISA** for enhanced performance.

Sena.ai : Sentiment and Emotion Analysis (Link) Jul 2024

- Fine-tuned **BERT** and **RoBERTa** models for text classification and sentiment analysis, improving accuracy.
- Implemented **sentiment and emotional analysis** for text, PDFs, URLs, and images, enabling comprehensive evaluation.
- Designed an **MPAA rating system** to determine media file age-appropriateness.
- Deployed models on a **Flask** backend and integrated with a **Next.js** frontend using **Flask-CORS** for seamless interaction.

WORK EXPERIENCE

Ei Lab, Dept of Design, IIT Guwahati Jul 2024 - Oct 2024

Design and Development Intern | Internship

- Developed the **DRM Gurukool website** for an event, supporting **1,500+** event participants, using **Next.js** for the frontend and **Supabase** with **PostgreSQL** for the database.
- Built the **Ei Lab website** with a **Next.js** frontend, improving **lab outreach** by **40%** through an enhanced digital presence.
- Worked on **user research, testing, implementation, and QA**, ensuring **98%** bug-free performance and a seamless user experience.

The Business Sentinel Nov 2023 - Jan 2024

Content Researcher | Internship

- Researched **market trends** and **competitor strategies**, improving content strategy effectiveness by **30%**.
- Compiled and analyzed data, generating **insightful reports** that enhanced decision-making by **25%**.
- Collaborated with content and marketing teams, ensuring **95% content accuracy** and relevance.

EDUCATION

Bachelor of Engineering in Information Science & Engineering 2022 - 2026

CGPA - 8.81 (2022 - Present)

RV Institute of Technology and Management, Bengaluru

TECHNICAL SKILLS

- Languages:** C/C++, JAVA, R, Python, HTML+CSS+JavaScript, TypeScript
- Libraries & Frameworks:** Flask, Next.js, React, Node.js, Tailwind CSS
- Databases:** MySQL, MongoDB, Supabase
- Cloud Technologies:** Google Cloud, Vercel SDK
- DevOps & Version Control:** Git, Docker, GitHub Actions
- Other Tools:** SolidWorks, Tableau, Power BI, Postman, Figma, LaTeX

PUBLICATIONS

- Mayank Chaturvedi, **Sujay J Ram**, S Sujeeth Shingade, Samatha R Swamy. **From Monolith to Microservices: A Systematic Literature Survey**, published at *3rd International Conference on Data, Decision and Systems, 2024*.

ACHIEVEMENTS

- 1st Prize Winner** | AD3X! Hackathon | Alkimi
- 1st Prize Winner** | Seamless AI Hackathon | Formidium
- Honorable Mention** | Emerging Tech Hackathon | Metadome.ai

EXTRAS

- Completed **Junior Examination** in **Flute** (Carnatic)
- Member of the **National Service Scheme (NSS)** at RVITM
- Completed **Praveen Uttarardh** Examination from Dakshina Bharat Hindi Prachar Sabha, Madras