# Vinish Das

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## EDUCATION

**Sahyadri College of Engineering and Management** **Mangalore, Karnataka, India**
*Bachelors of Engineering in Computer Science* *Expected Graduation: 2026*

- CGPA: **8.2**
- Courses: Data Structures & Algorithms, Operating Systems, DBMS Using SQL and MongoDB, Computer Networks, Software Engineering, Design Using Computer Graphics

## TECHNICAL SKILLS

**Programming Languages:** Python, C++, C, Java, JavaScript, TypeScript
**Libraries and Tools:** PyTorch, MySQL, MongoDB, Postman, FastAPI, React, NextJs, Tailwind CSS, Pandas, Numpy, OpenCV, Git

## PROJECTS

### Version-Controlled Text Editor [GitHub] **May 2025 – Jul 2025**

- Engineered a full-stack **text editor** with **Git-inspired** versioning to create, save, and branch document versions for parallel drafts and alternative endings.
- Implemented a **chunk-based delta storage** system (Git-like) that stores incremental changes only, lowering database usage and speeding version retrieval.
- Built a responsive UI with **React.js** and **Tailwind CSS**; backend APIs with **Node.js** and **Express**, secured by **JWT** authentication.
- Added **checkpointing**, **branching**, and an interactive **diff viewer** to highlight chunk-level changes and restore historical states.
- Persisted versions and metadata in **MongoDB** using an optimized schema for efficient branching and fast lookups.

### AI-Powered Express.js Documentation Generator [Github] **Jul 2025 – Aug 2025**

- Built a **CLI tool** to auto-generate professional **API documentation** from **Express.js** source code, reducing onboarding friction.
- Implemented dynamic analysis to recursively parse **Express** router stacks, enabling thorough endpoint discovery in nested and middleware-heavy apps.
- Leveraged **LLMs** (OpenAI, Hugging Face) to convert code and comments into structured Markdown docs with parameters and response models.
- Packaged for global install on **npm** with single-command execution and robust **.env** support.

### Workforce Management AI Web App **Apr 2025**

- Developed an **AI-driven** workforce management platform using **Graph Neural Networks** and classifiers for skill-aware task allocation.
- Achieved **90%** allocation accuracy by combining ML-based skill inference with GNN-driven reallocation.
- Integrated **Google Gemini API** for conversational task assignment and manager-in-the-loop decision support.
- Implemented leave-management workflows with automatic AI-based task redistribution and CSV ingestion for batch onboarding.
- Built with **Flask**, **Node.js**, **Python** and **Supabase** for real-time storage and processing.

## EXTRACURRICULAR ACTIVITIES

- **Winner – Interdepartmental Cultural Competition** *Jan 2024*
  Demonstrated leadership, coordination, and teamwork by collaborating with team members to plan and execute a high-impact performance, securing 1st place among competing departments.
- **Participant – TechVision-25, Sahyadri College** *May 2025*
  Selected to participate in an inter-departmental tech showcase featuring innovative student projects. Presented a custom-built API documentation tool that leverages LLMs to extract API endpoints and generate intelligent API calls based on contextual understanding.