Md. Rakibul Kabir

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 GitHub   🌐 Portfolio   in LinkedIn

Profile

I am a final-year Software Engineering student at SUST with interest in full-stack development. I am a language/framework agnostic person with a passion for building new things. I love exploring new technologies, especially those related to AI.

Education

B.Sc. in Software Engineering   Mar 2022 – Nov 2025

Shahjalal University of Science and Technology, Sylhet.   CGPA: 3.55 / 4.00 (as of the 6th Semester)

Technical Skills

- **Problem Solving:**   600+ problems solved across multiple platforms.
- **Languages:**   `C++` `Python` `Java` `JavaScript` `TypeScript`
- **Frameworks & Technologies:**   `LangChain` `FastAPI` `Next.js` `Node.js` `Express.js` `Tailwind`
- **Libraries:**   `React` `Socket.IO` `Next.Auth` `TensorFlow` `Streamlit` `Selenium`
- **Databases:**   `MongoDB` `MySQL` `Convex Vector DB`
- **Tools:**   `Git` `Docker` `Hugging Face` `Gen-AI API` `Cloudinary` `TipTap editor`

Projects

- **Effective Learning**   `Next.js` `TypeScript` `ShadCN` `Open AI SDK` `MongoDB`

  Role: *Full Stack Developer*   Github   Live Demo
  - **Idea:** A personalized programming learning platform to effectively learn C/C++ using LLM.
  - Integrated **OpenAI API** for handling user queries and requests.
  - Used **NextAuth.js** for authentication, **Mongo ORM** on chat sessions, session history, & profile data.

- **AI Notes**   `Next.js` `LangChain` `LiveBlocks` `Gemini API` `Tiptap` `Clerk` `Convex Vector DB`

  Role: *Full Stack Developer*   Github   Live Demo
  - **Idea:** An AI-powered text-editor that user can write notes, & get questions answer from uploaded PDF.
  - Integrated **RAG pipeline** into TipTap editor using Google's text-embedding model.
  - Added **Liveblocks.io CRDT** algorithm for real-time collaboration and co-editing on same workspace.

- **Image Classification**   `CNN` `TensorFlow` `FastAPI` `Streamlit` `Docker` `NextAuth`

  Role: *Full Stack Developer*   GitHub   Live Demo
  - **Idea:** A web-based image classification system using CNN to identify images with real-time predictions.
  - Built a custom CNN architecture with TensorFlow/Keras achieving high accuracy on image classification.
  - Developed RESTful API backend with FastAPI for efficient model serving and real-time image processing.

- **SMS Spam Classifier**   `Streamlit` `Pandas` `Numpy` `Scikit-learn` `Matplotlib` `Seaborn`

  Role: *Full Stack Developer*   GitHub   Live Demo
  - **Idea:** A platform to classify any SMS as it spam or legitimate.
  - Applied data preprocessing (cleaning, tokenization, TF-IDF feature extraction).
  - Trained & evaluated with **11 classification models**, where **Naive Bayes** achieving the best performance.

- **Campus Media**   `React` `Tailwind` `Node.js` `Express` `Redux` `MongoDB` `Cloudinary`

  Role: *Full Stack Developer*   GitHub   Live Demo
  - **Idea:** A social platform where students can follow friends, post on feed, and interact with chatbot.
  - Built frontend using **React** and backend with **Node.js & Express**.
  - Added **Redux** for state management and implemented custom hooks for efficient data handling.

Research Experience (Ongoing)

- **Effective Learning: AI-Powered Personalized Education System**   `Prompt Engineering`

  Md. Rakibul Kabir, Md. Farzine Hossen, Siam Arefin, Saikat Singh, **Supervisor:** *Fazzle Rabbi Rakib*

  Developing an intelligent learning platform that leverages prompt engineering to personalize education and deliver adaptive, effective learning experiences.   Github   Live Demo