

SAYAN BARMA

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PROFESSIONAL SUMMARY

Computer Science and Engineering undergraduate with practical experience in full-stack development, API integration, and secure communication systems. Adept in Python, Flask, FastAPI, and JavaScript. Engineered and deployed multiple end-to-end web and automation solutions with measurable results. Enthusiastic about addressing complex challenges using clean, scalable code and modular architectures.

EDUCATION

B.Tech in Computer Science and Engineering, BCET, Durgapur

Aug 2022 – May 2026

MAKAUT — CGPA: 7.3

Kendriya Vidyalaya No. 2 Delhi Cantt.

CBSE Class 12 (HSC): 87% — CBSE Class 10 (SSC): 93%

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Computer Networks, Database Systems, Machine Learning, Web Technologies

SKILLS

Languages: Python, Java, JavaScript, C

Web Technologies: HTML, CSS, Flask, FastAPI, Django, WebSockets, React.js

Databases: MySQL, MongoDB, PostgreSQL, SQLite

Tools: Git, GitHub

Libraries & Frameworks: Scikit-learn, TensorFlow, Pandas, NumPy, PyQt, Selenium, BeautifulSoup, Discord.py

Concepts: Automation, RBAC, Data Visualization, RSA Cryptography, Unit Testing

TECHNICAL EXPERIENCE

Rotom Bot *Tech Stack: Python, Discord.py, REST APIs, SQLite*

[\[GitHub\]](#)

- Developed a multifunctional Discord bot for automating tournaments, moderation workflows, and role configurations
- Integrated external APIs to offer translation, dictionary lookups, and Pokédex utilities
- Architected a modular command handler for scalable and maintainable role operations

Private Chat Application *Tech Stack: Flask, WebSockets, RSA, HTML/CSS*

[\[GitHub\]](#)

- Engineered a secure real-time messaging system using Flask and WebSocket-based channels
- Implemented RSA encryption for end-to-end confidentiality across communication
- Designed an adaptive UI with support for media sharing, optimized for both desktop and mobile platforms

DCC Integration with Blender *Tech Stack: FastAPI, PyQt5, SQLite, Blender API*

[\[GitHub\]](#)

- Integrated a custom Blender plugin to control asset inventory and object manipulation via FastAPI endpoints
- Created a real-time desktop interface in PyQt5 for interactive transformation tracking
- Streamlined data persistence and retrieval using lightweight SQLite storage and thorough backend testing

Jhagmag LED Controller *Tech Stack: Arduino, PyQt6, Librosa, HC-05, PyAudio*

[\[GitHub\]](#)

- Programmed a Bluetooth-enabled LED system with customizable visual patterns and a PyQt GUI
- Integrated live audio analysis and screen color detection to dynamically drive lighting responses
- Fabricated a compact, portable circuit with MOSFET integration and button-based offline controls