ARNAB MUKHERJEE

Rampurhat, West Bengal

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TECHNICAL SKILLS

Languages : C, C++, JAVA, HTML5, CSS, JavaScript, Python

Developer Tools : VsCode, GitHub Desktop , Android Studio

Technologies/Frameworks : GitHub, React.jS, FastApi, Node.jS, Tailwind CSS

Soft Skills : Active Listening, Teamwork, Communication, Time management, Adaptability

PROJECTS

Whisperwave ⎋ | Next.js, Zod, bcrypt, Mongoose, Typescript   **July 2024**

- Developed a secure, end-to-end encrypted messaging application using **Next.js, Mongoose, MongoDB, TypeScript, Zod, bcrypt, and next-auth**. Designed and implemented robust data models, authentication, and encryption protocols to ensure confidentiality. Managed full-stack development including frontend UX design, backend logic, and database integration.
- [Live site here](#)

PassVault ⎋ | React, AES-GCM, PBKDF2, Tailwind, FastAPI   **February 2025**

- Designed and implemented a highly secure, client-side password manager that leverages **AES-GCM** encryption and **PBKDF2** key derivation to protect sensitive user data. Ensured **zero-knowledge security** by never storing the master password or derived encryption keys, enforcing **session-based key management** where the Master Key is kept only in memory. Integrated **React & Tailwind CSS** for a responsive UI and used **FastAPI for API interactions** to securely store encrypted passwords. Implemented **robust authentication mechanisms** allowing users to encrypt, decrypt, and manage their stored credentials efficiently. .

COURSEWORK / SKILLS

- Operating Systems
- Computer Network
- MERN Stack Development
- Object-Oriented Programming (OOP)
- Data Structure Algorithm (Leetcode)

EDUCATION

Bengal College Of Engineering and Technology   **June 2022 – present**
Bachelor Of Technology - CGPA:7.8/10   *Durgapur, India*

Government Industrial Training Institute   **June 2019 – June 2021**
Industrial Training Program   *Suri, India*

Bolpur Nichupati Nirad Barani High School   **May 2017 – March 2019**
Higher Secondary   *Bolpur, India*

EXTRACURRICULAR

- Lead Organizer and Team Leader at the **Google Developer Groups (GDSC LEAD)** ⎋ at BCET, where I successfully organized the **GenAI Study Jam** ⎋ and other activities. I also lead a team of six members to promote technological learning and community engagement.
- Web Team Member Of **GDG Durgapur** ⎋
- Organizer at **CodeVision Club** ⎋ in BCET

LANGUAGE

- English
- Hindi
- Bengali