

# Sagnik Ray

B.Tech CSE Undergraduate  
Vellore Institute of Technology, Andhra Pradesh

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## Experience

**Digital Guru** *Delhi, India / Remote* *Jun 2025 – Present*  
Fullstack Web Development Intern

**Internshala** *Remote* *Jun 2025 – Present*  
Student Partner

## Education

**Vellore Institute of Technology, Andhra Pradesh** *Sept 2023 – Present*  
B.Tech in Computer Science and Engineering – **CGPA: 8.68 (through 4th semester)**

**Salt Lake School, Kolkata** *Apr 2021 – Feb 2023*  
Indian School Certificate (Class 12) – **78%**

**Salt Lake School, Kolkata** *Apr 2011 – Feb 2021*  
Indian Certificate of Secondary Education (Class 10) – **94%**

## Technical Skills

**Languages:** Java, Python, JavaScript, HTML, CSS, C, C++, TypeScript

**Frameworks/Tools:** React.js, Node.js, Git, SQL Server, MATLAB, R

**Soft Skills:** Problem-solving, Critical thinking, Communication, Team collaboration, Adaptability

## Projects

**HashChat – Decentralized Ethereum-Based Chat Platform** [GitHub](#) [Website](#) *Jan 2025*

- Engineered a decentralized dApp with Next.js, React, and Solidity, integrating MetaMask for wallet-based authentication and enabling **end-to-end encrypted** peer-to-peer messaging at **100+ messages/sec**.
- Developed and deployed Solidity smart contracts linking wallets to user accounts, bilateral friend management, and on-chain storage of **10,000+ messages** with **99.9% uptime** and zero single points of failure.
- Optimized large-file sharing by storing only metadata on-chain for files >100 KB, reducing gas costs by **70%** and transaction failures by **60%**.
- Designed a dynamic React UI with efficient state management, featuring user discovery, searchable contacts, real-time on-chain message display, and one-click local chat-history clearing.
- Conducted **100+ beta test sessions** across Windows, macOS, and Linux, achieving a **95% message-delivery success rate** and **90% positive user feedback**.

**Synapse Health – AI-Powered Virtual Health Assistant** [GitHub](#) [Website](#) *Apr 2025*

- Developed a multimodal virtual health assistant using **Whisper-large-v3** for accurate speech-to-text, reducing voice input errors by **35%** and enabling real-time doctor-patient simulation.
- Integrated **LLaMA-4 Scout 17B** for medical image content recognition, achieving **92%+ accuracy** in identifying visual symptoms like rashes and swelling from user-submitted photos.
- Used **Google Text-to-Speech (gTTS)** to generate natural doctor-like audio responses, increasing user engagement by **40%** in feedback surveys.
- Delivered a Python Gradio based UI with seamless multimodal input (voice, text, image), handling **50+ test user sessions** and improving diagnostic response time by **60%** compared to traditional rule-based bots.

## Achievements

- Top 8** – TechNova 2025, Coimbatore Institute of Technology (among **200+ national teams in the Finals**)
- Zonal Finalist** – Smart India Hackathon 2024 (Software Edition), **Ministry of Petroleum, Govt. of India**

## Certifications

- CS50x: Introduction to Computer Science** – Harvard University, Massachusetts
- Advanced Software Engineering Job Simulation** – Walmart Inc.

## Interests

Full-stack development, Blockchain integration, AI/ML research, Hackathons, Open-source contribution