

Arpan Kumar Mandal

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Chennai, TN

Programming Languages:

Python, Rust, C++, CUDA,
JavaScript, SQL

AI and ML Frameworks:

TensorFlow, PyTorch, XGBoost,
Generative AI, RAG

Technologies:

FastAPI, Docker, Git, Linux Sys-
tems, Vector Databases

Cybersecurity Skills:

Penetration Testing, Network Secu-
rity, Vulnerability Assessment

Data Science Bioinformatics:

Data Visualization, Genomics,
Statistical Analysis

B.Tech in Genetic Engineering

SRM Institute of Science and Tech-
nology

Expected Jan 2026

Class XII

Kendriya Vidyalaya Sangathan
88% — Jan 2022

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 github.com/thearpankumar

PROFESSIONAL SUMMARY

Computer Science enthusiast with expertise in AI/ML, cybersecurity, and soft-
ware development. Passionate about creating innovative solutions that bridge
technology gaps and enhance system performance through advanced algo-
rithms and cutting-edge technologies.

PROJECTS

EncryptiV – Client-Side Encrypted Microservices Platform May 2024 –
Present

- Developed a secure file storage platform with client-side, zero-knowledge
encryption, featuring high-performance backend microservices in Rust and
an SDK for developer integration.

GPU Vector DB – AI Document Processing Platform Jan 2024 – Mar 2024

- Built a GPU-accelerated AI platform for financial services with intelligent
Q&A, multi-LLM support, and a RAG architecture using Qdrant, FastAPI,
and parallel processing.

Samsung AI-OS – Voice-Controlled Cybersecurity Platform Apr 2024 –
Jun 2024

- Developed a voice-controlled AI automation system that integrates Kali
Linux to execute complex penetration testing and security workflows via nat-
ural language commands.

XGBoost CO₂ Adsorption Prediction Model Aug 2024 – Oct 2024

- Implemented an XGBoost model to predict nano-material CO₂ adsorption,
achieving high accuracy in identifying optimal configurations for carbon cap-
ture systems.

PROFESSIONAL EXPERIENCE

SafelyAPK – Security Analyst Intern Jun 2024 – Jul 2024

- Conducted reverse engineering on mobile applications to identify vulnerabil-
ities, malware, and data leaks using advanced static and dynamic analysis
techniques.

SRM-IST, CENTINEL – Founder/Vice-President Oct 2023 – Oct 2024

- Founded and led a cybersecurity club, organizing hands-on workshops and
competitions to foster practical skill development in students.

Fiverr – Freelance Developer Feb 2023 – Jun 2023

- Delivered Python-based automation scripts and web solutions to a global
clientele, managing projects from conception to deployment.

RESEARCH EXPERIENCE

Encryption as a Service (EaaS) Platform Development May 2024 –
Present

- Building a comprehensive, scalable encryption platform with API integration
to provide robust security solutions for enterprise applications.

AI-Based Virtual Psychiatrist Development Oct 2023 – Jan 2024

- Developed a Generative AI-based LLM with hallucination-reduction tech-
niques to provide ethical and reliable mental health support.