ARINDAM SAL

ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	M.Tech in Cyber Security	Indian Institute of Technology Delhi	7.38
2024	B.Tech in Computer Science and Engineering	MCKV Institute of Engineering	9.59
2020	West Bengal Council of HIgher Secondary Education (12th)	Santragachi Kedarnath Institution	83.6%
2018	West Bengal Board of Secondary Education(10th)	Tatarpur High School	92.71%

IIT DELHI THESIS

Title: Secure Boot and Trusted Logging for Automotive ECUs with HSM & TEE
Supervisor: Prof. Kolin Paul, Department of Computer Science and Engineering
Description: Building automotive microcontroller security stack to protect **ECUs** against firmware tampering, unauthorizedmodifications, and software attacks; Implementing **secure boot, trusted logging, and authenticated updates**, scaling fromRaspberry Pi prototype to **Infineon AURIX™ TC375** with **HSM-backed** key storage and **TEE**-protected runtime.
- Implemented multi-stage validation (**Bootloader → U-Boot → Monitor**), ensuring only signed firmware executes.
- Prototyped secure boot on **Raspberry Pi**, achieving **100%** authenticated execution with **<5%** verification overhead.

INTERNSHIPS

• **Sure Trust | Java Back End Developer** (May, 2023 - October, 2023) : *Hospital Management System*
  - Designed and developed backend modules using **Java**, **JDBC**, **Servlets/JSP**, **Hibernate**, **Spring Framework**, and **Spring Boot**. Built scalable and robust **REST APIs** and implemented secure data connectivity by integrating **SQL** Database for efficient data operation.

PROJECTS

————————————————————IIT Delhi Course Projects————————————————————

• **Decentralized NFT Marketplace (ERC-721, Ethereum) (Prof. S.V. Sharma)** (August, 2024 - November, 2024) :
  - Built a full-stack dApp for NFT minting, listing, selling, and burning using **Solidity** smart contracts, with metadata on **IPFS** (Pinata); implemented marketplace logic for secure ownership transfer, payment distribution, and listing management, optimized via **Hardhat optimizer**.
  - Integrated a **React.js** frontend with **Metamask wallet authentication**, and deployed/tested on **Ethereum** using Hardhat + Alchemy with **Ether.js** for seamless blockchain interaction.

• **Identity-Based Cloud Integrity Auditing With Data Hiding (Prof. Huzur Saran)** (March, 2025 - June, 2025) :
  - - Developed **identity-based cloud integrity auditing** with sensitive data sanitization, achieving **70%** peak and **45%** average speedup through optimized privacy-preserving algorithms.
  - Implemented **parallel verification** with tamper-evident logging and multi-layered blinding, enabling **O(1)** audit scalability, **58% faster** processing, and strong resistance to tampering and privacy attacks.

————————————————————B.Tech Major Project————————————————————

• **Supply Chain Management System using Blockchain (Prof. Surojit Bhattyacharyya)** (Jul, 2023 - April, 2024) :
  - Built a **Next.js web application** integrated with **MetaMask** and a backend, enabling suppliers, distributors, and retailers to securely interact with blockchain-based supply chain records.
  - Developed **Solidity smart contracts** on **Ethereum** using **Hardhat** for transparent product traceability, ownership transfer, and tamper-proof audit trails.

TECHNICAL SKILLS

• **Programming Languages:** C (Proficient), C++ (Proficient with STL), Python (Core), Java (Core, JDBC, Servlets/JSP), Spring Boot(Framework) Solidity (Basics), SQL
• **Software & Tools:** Git, MySQL, Wireshark, Burp Suite, Android Debug Bridge, NMap, Jadx-Gui

SCHOLASTIC ACHIEVEMENTS

• Receieved **Outstanding Teaching Assistant Award** in COL100(Introduction to Computer Science) in Semester-II (2024-25)
• Qualified **GATE** 2024 CS/IT

POSITIONS OF RESPONSIBILITY

• **Teaching Assistant for the course** Introduction to Computer Science(COL100)-**Best TA Award** & Data Structures and Algorithms(COL106)**, IIT Delhi** (Jul, 2024 - Present)

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IIT COURSE

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M.Tech in Cyber Security	Indian Institute of Technology Delhi	7.38	---

COURSES DONE

Advanced Data Structures, Computer Networks, Cryptography & Computer Sec., Introduction To Blockchains, Cryptocurrencies, And Smart Contracts, Resource Management In Computer Systems, Minor Project, Networks & System Security, Special Topics In Cyber Security