



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2023	M.TECH Dual Degree 5Y	IIT Kharagpur	8.03 / 10
2018	AISSE	Maharshi Patanjali Vidya Mandir, Allahabad	90.2%
2016	AISSE	Lions School, Mirzapur	9.4 / 10

COURSEWORK INFORMATION

Theory and Application of Blockchain | Operating Systems | Computer Networks | Object Oriented Systems | Design Patterns | DataBase Management Systems | Algorithms I | Information Retrieval | Foundations Of Cryptography | Artificial Intelligence | Image Processing | Natural Language Processing | Computer Organization and Architecture | Probability and statistics | Algorithms II | Software Engineering | Compilers | Programming and Data Structures

INTERNSHIPS

Software Engineering Intern | Citrix Systems

May'22-July'22

Printing Extension for Citrix Workspace Web App

- Developed a Sender Extension for Chrome that accepts files that are dragged and dropped on it and converts it to a binary string and sends the string to Receiver Extension through sendMessage api
- Developed a Receiver Extension for Chrome that listens to the incoming messages containing the files and prints the files if it is PDF using the attached local/network printer

Google Advanced Closure Compiler- A tool for making JavaScript code download and run faster

- Changed the javascript code of Citrix Workspace Web to remove errors and warnings while compiling with GACC

PROJECTS

Distributed Provenance Tracking | Masters Thesis Project

Aug'22-Present

Mentor- Prof. Sandip Chakraborty, Dept of Computer Science and Engineering, IIT Kharagpur

Objective: Develop a novel approach to combining system and microservices logs together to generate a Universal Provenance Graph (UPG) that can be used for provenance tracking over serverless architecture

- Developed a Loadable Kernel Module (LKM) for runtime unit identification over the logs by intercepting system calls

Cognitive and Affective Evaluation Tools for Detection and Problem Solving Capabilities

Apr'21-July'22

Mentor- Prof. Partha P. Chakrabarti, Dept of Computer Science and Engineering, IIT Kharagpur

Objective: Develop an Android and iOS app in Flutter for collecting data and integrating it with Machine Learning algorithms for screening, suggesting other tests, and predicting Cognitive Disorders like Dementia and ADHD

- Designed a flutter app for performing Clock Drawing Test with features like **undo, redo, eraser, select and move, etc**
- Developing Deep Learning model for clock drawing test using **Sliding Window** and **Convolutional Neural Network**

Library Management System | Database Management Systems Term Project

Mar'21

Mentor- Prof. Shamik Sural, Dept of Computer Science and Engineering, IIT Kharagpur

Objective: Lead a project team to create a comprehensive dynamic library management and maintenance system

- Wrote MySQL **queries and triggers** for retrieving, adding, editing tables, and maintaining consistency in tables
- Developed Django backend from scratch to handle GET and POST requests and send webpage or json response
- Developed flutter app to request, send data using GET and POST methods and display the incoming json response

PintOS | Operating Systems Term Project

Feb'21-Mar'21

- Improved thread blocking and Implemented **Multi Level Feedback Queue Scheduling**, and **System Calls**
- Developed pintOS to run user programs with arguments (by changing program stack structure)

Multi-User Chat and File Sharing program | Computer Networks Term Project

Mar'21

- Created a Chat program in C that can connect to multiple instances of the same program running on a network
- Created a client and a server program where a client can request, and server sends the requested file if it exists

SKILLS AND EXPERTISE

- Programming Languages** C/C++, JavaScript, Python, Java, Dart, Rust
- DataBases** MySql, MongoDB
- Frameworks** STL, POSIX, Numpy, Django, Flutter, Matplotlib, Pytorch, Keras, Selenium
- Tools** Google Closure Compiler, Docker, Nginx, Wireshark, GDB, Ghidra
- Others** HTML, CSS, Pearl, Flex, Bison, Octave

AWARDS AND ACHIEVEMENTS

- Secured rank 1185 in round E of Google Kickstart 2021
- Secured All India Rank(AIR) **425** in Joint Entrance Examination (Advanced) 2018, among 1.3 million candidates.
- Cleared round I of Kishore Vaigyanik Protsahan Yojana- **KVPY 2017** SX stream

EXTRA CURRICULAR ACTIVITIES

- Part of **1 Silver** and **1 Bronze** winning Illumination team of Radhakrishnan Hall of Residence in 2019 and 2018
- Volunteered at NSS, IIT Kharagpur, providing teaching facilities to underprivileged children in nearby schools