

Education

- Indian Institute of Technology, Kharagpur** **West Bengal, India**
Bachelor of Technology in Computer Science; CGPA: 9.58/10 *Jul. 2017 – May. 2021*
- Delhi Public School, R.K. Puram** **New Delhi, India**
All India Senior School Certificate Examination; Aggregate: 94.6% *Jul. 2015 – May. 2017*
- S.H.M.D School, Alipurduar** **West Bengal, India**
All India Secondary School Certificate Examination; CGPA: 9.80/10 *Jul. 2007 – May. 2015*

Skills and Relevant Coursework

- Languages and Technologies:** C, C++, Python, Javascript, Java, Flask, PyTorch, Tensorflow, OpenCV, MySQL, MongoDB
- Relevant Coursework:** Algorithms, Machine Learning, Natural Language Processing, Compilers, Probability and Statistics, Computer Organization and Architecture, Cryptography, Operating Systems, Computer Networks, Information Retrieval, Scalable Data Mining, Database Management Systems, High Performance Computer Architecture, Distributed Systems

Work Experience

- Adobe** **Bangalore, India**
Research Intern, Guide : Dr. Sunav Choudhary *May. 2020 - Jul. 2020*
 - Developed a robust and flexible system with distributed architecture for federated learning experimentation.
 - Employed strategies to make the system scalable at every end, from the web server to the core modules.
 - Used Apache Kafka as the messaging infrastructure and MongoDB as the database.
 - Integrated support for a wide range of clients including mobile phones, web-clients and virtual machines.
 - Performed extensive experimentation with hundreds of virtual end clients on various settings and datasets.
 - Demonstrated significant improvements in time taken to reach desired accuracies by employing asynchronous strategies.

Key Projects

- A Platform for Autograded Assignments** *Jan. 2020 - Apr. 2020*
Personal Project
 - Developed a course management platform that allows instructors to offer autograded programming assignment.
 - Integrated various features including analytics, code annotation and cheat detection
 - Implemented apis using Flask for command line submission of programs onto the server.
 - Implemented a scalable autograder in the backend for grading C, C++ and Assembly programs.
 - Developed an Android app for easy monitoring of marks and updates on assignments.
- A Search Engine for Legal Documents** *Mar. 2019 - Apr. 2019*
Team Project
 - Contributed to the development of a search engine tailored for handling Legal Queries.
 - Implemented the web backend with python Flask and deployed the application to a linux server.
 - Contributed to the development of the model for handling Natural Language queries.
 - Worked with front-end technologies to develop the user interface of the application.
- Aspect Extraction Task** *Jan. 2020 - Apr. 2020*
Research Project
 - Studied various techniques for the task of Aspect Extraction and Aspect Based Sentiment Analysis.
 - Modified the current DeCNN architecture for aspect extraction by adding inception modules.
 - Accuracy increased by 1.52% on SemEval 2016 Laptop dataset and 1.65 % on SemEval 2016 Restaurant dataset.
- An Analysis of Debating Styles on Prime Time News** *Jan. 2020 - Ongoing*
Bachelor's Thesis, Guide : Dr. Animesh Mukherjee
 - Studied the debating styles of anchors on prime time news in India looking for patterns influencing popularity.
 - Developed calculable metrics to investigate the debating styles from audio and video data.
 - Developed pipelines to efficiently segment the speeches of the debaters to calculate features.

Course Projects

- Operating Systems** : Integrated threads and user programs into pintOS.
- Advanced OS** : Implemented a linux compatible ext2 file system from scratch.
- Computer Networks** : Implemented reliable and connection-oriented communication on top of UDP.
- Compiler Design** : Developed a compiler for a subset of the C language.
- Computer Architecture** : Implemented a single cycle 32-bit CPU using Verilog.

Extracurricular Activities

- Technical Head, MatSoc** : Served as the Technical Head of the Mathematics Society at Delhi Public School, R.K. Puram.
- Member, NSS** : Served as a member of the National Service Scheme under Ministry of Youth and Affairs, India.