

AAYUSH INDRAPRATAP SINGH

+1 (919)-345 8190 | asingh48@ncsu.edu | [linkedin.com/in/aayoooush](https://www.linkedin.com/in/aayoooush)
Raleigh, NC, USA

PROFESSIONAL EXPERIENCE

Cyber Security Analyst, Tata Consultancy Services Limited, Mumbai, India

August 2020 – June 2021

Responsibilities :

- Analyzed network and host-based security appliance logs to determine the threat levels.
- Developed tool to streamline the analysis process, helping reduce time consumption by 50%
- Documented all activities during an incident and delivered the leadership with status updates of the incident.
- Investigated incidents and collected additional information to either resolve or escalate the issue to the appropriate teams.

Technology Development Intern, Naman Angels India Foundation, Mumbai, India

September 2018 – March 2019

Responsibilities :

- Directed the backend of the web platform, where Investors can connect to Startups and vice-versa, using PHP and MySQL
- Facilitated to assemble a wireframe for inter-user connectivity and user profiles.
- Oversaw 3 incremental updates to the platform during the tenure.

EDUCATION

Master of Computer Science, North Carolina State University, Raleigh, NC, USA (GPA: 4/4)

August 2021 – December 2022

Courses: Design and Analysis of Algorithms, Automated Learning and Data Analysis, Internet Protocols, Software Engineering*, Database Management System*, Experimental Statistics for Engineers I*
(* Upcoming)

Bachelor of Engineering, University of Mumbai, Mumbai, India (CGPI: 8.43/10 || 3.7/4)

August 2016 - October 2020

Major: Computer Engineering

Relevant Courses: Data Structures, Object Oriented Programming, Analysis of Algorithms, Operating Systems, Computer Networks, Cryptography and System Security, Database Management System.

ACADEMIC PROJECTS

SOCKET PROGRAMMING – FTP Client -Server with Error Control (Python, Socket, UDP, ARQ)

October 2021 – November 2021

- Developed a File Transfer Service with Error Control Mechanisms, like Go-Back N and Selective Repeat ARQ, to maintain integrity of data during the transmission.
- Analyzed effects of varying N, MSS and Packet Loss Probability on data transmission delay.

SOCKET PROGRAMMING – P2P - File Distribution System (Python, Socket, TCP/IP)

September 2021 – October 2021

- Implemented a Peer-To-Peer File Distribution System with a Centralized Index for File Transfer using TCP/IP and Socket Library

MACHINE LEARNING - Crop Disease Detection and Diagnosis (Python, TensorFlow, Keras)

August 2019 – April 2020

- Surveyed and tested Deep Neural Network and Convolutional Neural Network for classification of images in 38 classes of diseases and achieved maximum accuracy of 99% by implementing classification using CNN.
- Created a platform that inputs crop leaf images and utilizes a classifier at the back-end to classify and provide a diagnosis if any disease is detected.

DATA ANALYSIS - Result Analysis Application (Python, NumPy, Pandas, Matplotlib)

August 2019 – February 2020

- Designed a software application for the institution to analyze and visualize the results of students.
- Facilitated the Department of Computer Engineering to recognize the students failing to cope up with academics.

ARTIFICIAL INTELLIGENCE - Chess Engine (Python, NumPy)

February 2019 - April 2019

- Developed an application to simulate human-level intelligence in the game of chess using Minimax Algorithm and Alpha-Beta Pruning and achieved an accuracy of 79% in predicting one of the top 5 moves recommended by a traditional chess engine.

DATA ANALYSIS - E-Commerce (Python, NumPy, Pandas, Matplotlib)

March 2018 - April 2018

- Performed analysis of sales of an e-commerce web platform by uploading records of sales as a CSV file, which is processed and analyzed to generate an output consisting of graphs and charts, thus providing various trends and patterns in sales of products in a country.

TECHNICAL SKILLS

- **Programming Languages & Frameworks:** Python, C, Java, TensorFlow, Socket
- **Web Development & Databases:** PHP, JavaScript, MySQL, MongoDB, AWS DynamoDB
- **SIEM Tools:** DNIF

AWARDS AND ACHIEVEMENTS

- 1st Runner-up in Smart City Ideathon held in association with IEEE, in March 2019, hosted at University of Mumbai, India.
- 3rd Runner-up in National Level Hackathon TSEC-HACKS in February 2019, hosted at University of Mumbai, India.
- Winner in BITS-PLEASE, RGIT-Technical Coding Competition in March 2018.
- Goethe certified German-A1 pupil, August 2019

LEADERSHIP AND VOLUNTEERING EXPERIENCE

- Organized a University level Hackathon, managing 250+ participants and 50 volunteers over 2 days.
- Founded RGIT-Codecell, a college-level coding community for students, in September 2019.
- Operated as a Lead Developer in Software Development Cell from August 2019 – February 2020.
- Elected as the Technical Secretary Computer Engineering Student Society for the term 2019-2020, heading a team of 20 members.
- Worked as a member of the Association of Computing Machinery (ACM) from 2018-2019.