MONALISHA OJHA

Mathematics and Computing Student

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EXPERIENCE

Research Intern
IMEC (Interuniversity Microelectronics Centre)

📅 january 2023 – June 2023   📍 Leuven, Belgium

- Working on a Master thesis concerning Ramulator which is an open source DRAM Simulator.
- My thesis is majorly focused on simulating dynamic interaction between main memory and storage technology.

Research Intern
AI Institute of University of South Carolina

📅 August 2022 – December 2022   📍 Remote

- Worked as a research intern on NLP projects.
- I am working on the Deception project, where ML algorithms is designed to detect deception in Dialogues.

Open Source Developer
Google Summer of Code at Stellar Group

📅 May 2022 – August 2022   📍 Open Source

- Working as a open source developer in Stellar Group on Traveler (It is an integrated visualization system for parallel execution data, including OTF2 traces annd HPX execution trees.)
- Upgrading the Traveler GUI to handle multiple datasets related to parallel computing using Python and RESTful services.

Open Source Developer
Google Summer of Code at CERN-HSF

📅 May 2021 – August 2021   📍 Open Source

- Worked as a developer in Ganga (It is a tool to compose, run and track computing jobs across a variety of backends and application types).
- Developed Ganga GUI using Flask and worked on RESTful services.

TEQIP Research Intern
Indian Institute of Technology, Indore

📅 December 2019 - January 2020   📍 IIT Indore

- Worked on Earthquake Magnitude Prediction in the north-east region of India using Deep Learning and various Machine Learning Models.Compared the accuracies of the model to find the best model.

Microsoft Codess Mentee
Microsoft

📅 May 2020 – August 2020   📍 Remote

- Worked on developing shortest Path Finder Visualizer using Javascript.

PROJECTS

Cryptocurrency Trading Algorithm

- Developed a basic cryptocurrency trading algorithm in python. The strategy used in this project is called Moving Average Crossover. The data is collected from yahoo finance.

Action classification task based on Internet Firewall logs

- The purpose of this project is to predict the action that needs to be taken(allow or not allow) for particular quantity of data based on Internet Firewall logs. The Machine Learning models used in this project are: Linear Regressor, Random Forest Classifier, Ada Boost Classifier, Extra Trees Classifier, KNN Classifier.

Face Detection Car/Bot

- The car will detect and follow faces. I have used haar casscade classifier to detect. A camera is fitted on the car which sends real time data,when a face is detected , the car travels to the face according to area and distance of the face. The car is controlled using Arduino.

Network traffic anomaly detection

- This project focuses on the identification of rare items, events or observations which raise suspicions by differing significantly from the majority of the network data. Bi-directional LSTM is used for detection.

MASTER THESIS

Simulating Dynamic Interaction Between Main Memory and Storage Technology

- This thesis is made under IMEC (Interuniversity Microelectronics Centre), Belgium and Birla Institute of Technology, Mesra, India. It majorly focuses on creating an interaction between DRAM and SSD to increase the efficiency of a system.

TECHNICAL SKILLS

- **Programming Languages** - Python, C++, Javascript.
- **Libraries/Frameworks** - Tensorflow, Scikit-Learn, PyTorch, Django, Flask, Selenium.

EDUCATION

Integrated MSc. in Mathematics and Computing
Birla Institute of Technology, Mesra

📅 2018 - 2023 📍 Ranchi, India

Senior Secondary (XII), Science
DR. A.N.K. D.A.V. PUBLIC SCHOOL

📅 Year of completion: 2018 Percentage: 82.40

Secondary (X)
DR. A.N.K. D.A.V. PUBLIC SCHOOL

📅 Year of completion: 2016 CGPA: 10.00/10

CERTIFICATIONS

International English Language Testing System
British Council **Grade- 8.0/9.0**

- **Tools / Platforms** - Figma, Git/Github, Docker.
- **Databases** - MongoDB, MySQL.
- **Cloud Experience** - AWS

OPEN SOURCE

Ganga Traveler Stellar Group Layer 5