Education

Indian Institute of Technology (IIT) Kharagpur

Kharagpur, India

Bachelor in Technology

2016-2020

Activities: Kharagpur Open Source Society, Signal and Image Processing Lab, Quiz Club, MetaKGP

Experience

JP Morgan Chase and Co.

Mumabai, Maharashtra

Jul 2020-Present

Quantitative Research Analyst

Developed regression testing using multiprocessing and created mail alert system using SMTP and MIME

- Developed auto-doc to automatically generate documentations, reducing time taken from 4 hours to under 10 seconds
- Developed Expected Loss models for Debt Portfolios exceeding 500Bn USD using Python and R using statistical methods
- Worked on Model Forecasting Engine across 5+ models leveraging Low Level Design concepts and multiprocessing
- Improved performance of existing backtesting engine by upto 20x by efficient vectorized implementation
- Worked on data processing, validation and backtesting of Expected Loss models

Google Summer of Code - Python Software Foundation

Remote

Software Developer

Summer 2018

- Fixed and improvised the grepping system of Mercurial to add '-all' flag and 'grep' on history as per the Grep Plan
- Improved functionality of 'diff' in Mercurial to show colorised in-line diff and better 'diff' output of tests suite results
- Worked on multiline commit message support
- Added passing of revision number instead of revision hash to histedit mercurial extension

Anheuser-Busch InBev

Bengaluru, Karanataka

Data Science Intern

May 2019-Jul 2019

- Built an automated Data Visualization pipeline from the Data Lake using Python Scripting and SQL Queries
- Brought insights from the employees data and built tool to identify relevant clusters of concern
- Used Machine Learning models like Random Forests to find major drivers for Employee Attrition in the organization

Autonomous Underwater Vehicles

IIT Kharagpur, West Bengal

Software Team

Feb 2017-March 2018

- Implemented Deep Learning methods for buoy detection using Single Shot Multi Box Detector and Mobile Nets
- Made the inference of models fast and suitable for the bot using Movidius Neural Compute Stick and reduced the cost

Skills

Skills: Linux, Backend (Spring, Maven), Frontend (HTML, CSS, JS, React), Devops (Docker, Git, GitHub)

Languages: Java, Python, C++, JavaScript, R

ML/Data TensorFlow, Scikit Learn, PyTorch, Keras, OpenCV, FastAl

Volunteer Experience

Kharagpur Open Source Society

IIT Kharagpur, West Bengal

Advisor and Former Executive Head

Oct 2017-Present

- Contributed to the development of KWoC 2017 Website with more than 2700 registrations KWoC 2017
- Mentored students in Kharagpur Winter of Code 2017 : Generative Adversarial Networks
- Successfully conducted the first ever Open Source Summit during the Tech Fest of Kshitij 2018 and in Kshitij 2019

Projects

AudAn: Smart India Hackathon

- Developed AudAn, an app doing Cognitive Analysis of students in a classroom to evaluate their performance
- Qualified to Top 6 Nationally in the AI for Education theme in Smart India Hackathon 2019 by Govt. of India

VySyBI

- Won 1st Prize in Xilinx Innovation Challenge 2019 among 11 different engineering institutes across India in KTJ'19
- Developed a Blind Assistant System on Xilinx PYNQ Board by building an Image Captioning and TTS pipeline