

Kush Kothari

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📍 Mumbai, India

Experience

Google Summer of Code 2022 @ CERN-HSF

Software Developer

📅 July 2022 – Sept 2022

- Contributing features to Uproot, an I/O library responsible for streaming ROOT data to Python libraries for downstream analysis.
- Responsible for introducing a new "delayed" paradigm to Uproot that allows users to scale and parallelize programs.
- Tested the functionality in single core, multiprocessing and distributed settings.
- Introduced a major version change to Uproot as a result of my work.

Data Analysis Intern @ NTU, Singapore

Data Analyst

📅 May 2022 – July 2022

- Analysed seismic time-series data and applied methods in picking P-Wave arrival times to the same.
- Prepared data for further statistical analysis workflows.
- Applied statistical and machine learning tools like STA/LTA and PhaseNet in automatically identifying and labelling seismic waves.

Summer Intern @ Renwick Lab

Software Developer

📅 April 2022 – May 2022

- Contributed to ongoing research in applying Graph Neural Networks to rate effectiveness of treatment in lung cancer.
- Tasked with developing a GNN-explainer class that uses microRNA - messengerRNA interaction analyses to gauge treatment response.
- Greatly simplified the existing GNN model, providing better insights to understanding which miRNA-mRNA interactions are most probable in causing lung cancer.

Google Summer of Code 2021 @ NumFOCUS

Software Developer

📅 July 2021 – Sept 2021

- Worked on adding features to a open-source Python library, Data Retriever, that automates data-science tasks like download/install.
- Modeled and implemented a data set download pipeline, that is responsible for the automatic testing of spatial datasets, which resulted in the addition of 18 new datasets to the platform.

Projects

- **VidyaConnect** : A student-mentor matching platform that uses ML to match students with appropriate mentors through analysis of student queries.
- **Gesture-Controlled Mouse** : An application that improves user accessibility by allowing them to control the mouse using gestures.
- **Turn-The-Tables** : A web app that takes the image of a table as input and outputs the same table in a xlsx or csv format.
- **sravjti.in** : Designed, prototyped and implemented the entire website. Being SEO-optimized, it has more than 2.9k views per week.

Education

B.Tech in Computer Engineering

Veermata Jijabai Technological Institute

📅 2019 – 2023

Higher Secondary School

Sri TP Bhatia College of Science

📅 2017 – 2019

School

Rustomjee Cambridge International School

📅 grad. 2017

Skills

Languages: Python, JavaScript, C, C++

Analysis Tools: Pandas, Dask, Matplotlib

ML/DL Tools: PyTorch, Scikit-Learn, DGL

OSes: Linux (Arch, Debian, CLI), Windows

Dev Tools: Git, Vim, Docker

Achievements

- Selected twice Google Summer of Code, a highly competitive program focused on open source development.
- Placed first in KJ Somaiya's DataZen 24h hackathon.
- Ranked 2532 in the Joint Entrance Exam 2019 (JEE Mains) among 929k students (99.89 percentile)

Positions of Responsibility

CoC Head

Community of Coders, VJTI

Mentored and Taught an audience of about 150-200 in hands-on workshops on topics like web development and machine learning.

Core Team Member

Society of Robotics and Automation

Mentored and guided immediate juniors in getting acquainted to open source. As a result, many immediate mentees were selected for Google Summer of Code 2022.