SAMYAK S SARNAYAK

Undergraduate Student

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samyak-s-sarnayak   ☁ Qwiklabs   ▫ Coursera

EXPERIENCE

Summer Intern
Akamai Technologies 🌐

📅 May. 2021 – Present   📍 Bengaluru, India

- Building a platform for data analysts to query over existing data lakes (with multiple Petabytes of data) using open source technologies.

Intern
RuleZero 🌐

📅 Jul. 2020 – May 2021   📍 Bengaluru, India

- Built a smart search tool to extract data from a legal database consisting of investors, cap table and related information.
- Wrote an efficient API query system and general filter functions for nested JSON data.

Tech Core
PES Open Source 🌐

📅 Sep. 2019 – Present   📍 Bengaluru, India

- Helped organise Hacktoberfest 2019 events at PESU.
- Conducted meet-ups and tutorials.
- Started the `browser-history` project.

Intern
Deeplogick 🌐

📅 Dec. 2019 - May 2020

- Trained and deployed object detection models based on SSD MobileNet V2.
- Optimised models to run on GPUs and Jetson Nano using TensorRT.
- Built a model trainer API through a scheduler.

ACHIEVEMENTS

🏆 **1st place at ISFCR CTF 1**
Capture-The-Flag hackathon conducted at PESU

🏆 **1st place at ISFCR CTF 2**
Second edition of the above CTF

🏆 **1st place at HaXplore 2.0, IIT-BHU, Varanasi**
National Level Hackathon

PROJECTS

browser-history ○

📍 PES Open Source

- Open Source Python Package for retrieving any browser's history.
- Over 80 pull requests, 7500 downloads on PyPI.
- Presented the project at PyCon India 2020 DevSprints.

heiko ○

- A fault-tolerant lightweight scheduler to manage servers running on lightweight devices such as phones and Raspberry Pis.

par-a-graph ○

Parallelized Pagerank algorithm to achieve upto 4.2x, using goroutines

gopy ○

A compiler for a subset of Go written in Python

skip-list ○

C++ implementation of skip list, achieves sub-microsecond logarithmic time operations

📅 Jul. 2020

fourier-dnn ○

Tensorflow 2.0 implementation of Fourier feature mapping networks

📅 Jul. 2020

Anomaly Detection using Self-Organising Maps

📅 May - Jul. 2020   📍 CCBD, PES University

- Applied the model on data such as Cricket, Tennis and YouTube videos.

Abstractive Summarisation using Reformer

📅 Jan. - Jun. 2020   📍 PES University

- Built a decoder-only language model for Summarisation of 24k tokens (approx. 5k words) on single GPU.

🏆 **Grand Finale Winners at EY GDS Hackpions 2.0**
National Level Hackathon

🏆 **2nd Place at AI Challenge, Phase Shift 2019**
Recognising and classifying waste products

🏆 **3rd Place at Gov-TechThon 2020 by IEEE**
National level hackathon

🎖 **CNR Rao Merit Scholarship**
12th rank in 1st & 2nd semester CSE

🎖 **MRD Merit Scholarship**
3rd semester CSE

EDUCATION

B.Tech. in Computer Science and Engineering
PES University

📅 2018 – 2022   📍 Bengaluru, India

Currently in Sixth Semester. CGPA: 9.61.

Pre-University College - Class 11, 12
Sri Kumaran Children's Home PU College

📅 2016 – 2018   📍 Bengaluru, India

Board: Department of Pre-University Education. Percentage in 2nd year PUC: 95.16%.

Class 9 and 10
VLS International School

📅 2014 - 2016   📍 Bengaluru, India

Board: Council for the Indian School Certificate Examinations (CISCE). Percentage in Class 10: 92.66%.

SKILLS

| Python | Golang | C | Julia | JavaScript | SQL |

| Open Source | Git | 1300+ contributions in the past year |
| CI/CD | Publishing Packages |

| Linux | Docker | Distributed Systems |

| Parallelization | CUDA |

| REST APIs | JavaScript | Angular |

| ANNs | PyTorch |

- Applied Gap Sentence Generation for self-supervised pre-training.

Bengaluru's Greenest Areas

📅 May 2020   📍 PES University

- 5,38,000 satellite images. Found the percent of green using OpenCV.
- Custom multi-threaded map-reduce in python - processes 440,000 entries within 2s.

SVDNN.jl

Used Singular Value Decomposition to decrease training time of neural networks by 1.2x to 2.7x

NeuralNetwork.jl

Custom Neural Network with support for GPU (upto 3x speed up)

CapStyle

Stylized Image Captioning using Deep Learning Models

📅 Jun. 2019 - Jun. 2020   📍 CDSAML, PES University

- Custom dataset named CapStyle5k derived from Flickr8k. Seq2seq attention models. Achieved 0.6 BLEU.

Miscellaneous

- Recipe Viewer : A web app to aid in cooking. DSC PESU.
- Sentiment Analysis of Tweets : C program to get random tweets and perform basic sentiment analysis.
- Time Series Analysis of Amazon.in data : A data science project about collecting and analysing Amazon data.
- Intru Sense: Canary Tokens Based Mechanism To Notify Against Intruders.
- BlockChat : A blockchain based messaging application
- LightSabre : An Ethereum Dapp for luggage tracking using Blockchain.
- Seed Tracking system: Built on the Hyperledger Fabric blockchain. Submission for 3rd place at Gov-TechThon 2020 by IEEE.
- Park-O-Report : HackBout 2020 submission. React native mobile app, TF lite object detection. APIs in Flask for Number plate recognition and Geospatial indexing.

LANGUAGES

English
Konkani
Hindi
Kannada