SAMYAK S SARNAYAK

Undergraduate Student

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samyak-s-sarnayak   ☁ Qwiklabs   🖥 Coursera

EXPERIENCE

Intern
RuleZero 🌐

📅 Jul. 2020 – Present   📍 Bengaluru, India

- Built a smart search tool to extract data from a legal database consisting of investors, cap table and related information.

Tech Lead
India Against COVID 🌐

📅 Sep. 2020 – Present

- Working with a team of data scientists and analysts to solve problems which emerged from the pandemic.
- Epidemic modelling and computing factors related to COVID such as case fatality rate.

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

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

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

PROJECTS

browser-history ⚙

📍 PES Open Source

- Open Source Python Package for retreiving any browser's history.
- Over 50 pull requests, 2000 downloads on PyPI.
- Presented the project at PyCon India 2020 DevSprints.

fourier-dnn ⚙

Tensorflow 2.0 implementation of Fourier feature mapping networks

📅 Jul. 2020

Anomaly Detection using Self-Organising Maps

📅 May - Jul. 2020   📍 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.
- 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. Optimised using custom GPU kernels (upto 3x speed up).

EDUCATION

B.Tech. in Computer Science and Engineering
PES University

📅 2018 – 2022   📍 Bengaluru, India

Currently in Fifth Semester. CGPA: 9.73.

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 | C | Julia | JavaScript | PostgreSQL

Data Collection | Data Cleaning | Basic Visualisations | Basic ML

ANNs | Production DL | CNN | RNN | Transformer | Reformer

Fourier Feature Networks | GANs | PyTorch | TF 2.0

Open Source | Git | 800+ contributions in the past year | CI/CD | Publishing Packages

Linux | Configuring servers

Cloud | Docker | Heroku | AWS EC2 | AWS RDS | PostgreSQL

Flask | Quart | REST APIs | WebSockets | Heroku

HTML5 | CSS | JavaScript | Bootstrap | AJAX

Blockchain | Solidity | Web3.js | Truffle

CapStyle 🌐
Stylized Image Captioning using Deep Learning Models

📅 Jun. 2019 - Jun. 2020   📍 CDSAML

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

Park-O-Report 🌐
An app to report illegally parked vehicles

📅 Mar. 2020   📍 HackBout 2020, NMIT

- React native mobile app, TF lite object detection.
- APIs in Flask for Number plate recognition and Geospatial indexing.

Seed Tracking system
Built on the Hyperledger Frabic blockchain

📅 Oct. 2020   📍 Gov-TechThon

Osintology
Automated collection of social media activity of potential suspects

📅 Feb. 2020 – Apr. 2020   📍 India Police Hackathon 2020

LightSabre 🌐
An Ethereum Dapp for luggage tracking using Blockchain

📅 Oct. 2019 - Nov. 2019   📍 Sabre Hackathon

BlockChat 🌐
A blockchain based messaging application

📅 Sep. 2019 - Nov. 2019   📍 PES University

Intru Sense
Canary Tokens Based Mechanism To Notify Against Intruders

📅 Jan. 2020 - Apr. 2020   📍 PES University

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.

LANGUAGES

English
Konkani
Hindi
Kannada