SAMYAK S SARNAYAK

Software Engineer

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EXPERIENCE

Software Engineer
Chaos Genius 🌐

📅 Sep. 2021 – Present 📍 Bengaluru, India

- Working on the core API, DevOps and Open Source health.
- Managed several releases, revamped alerting system.

Summer Intern
Akamai Technologies 🌐

📅 May 2021 – July 2021 📍 Bengaluru, India

- Architected and set up a platform to query over existing data lakes (with multiple Petabytes of data).
- Benchmarked Trino to find optimal configuration and achieved 5x+ speedup in query times.

Co-instructor - Machine Learning with Julia
PESU IO 🌐

📅 Feb. 2021 – Mar. 2021 📍 Bengaluru, India

- Taught the course to 15+ first year students.

Intern
RuleZero 🌐

📅 July 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.

Tech Core
PES Open Source 🌐

📅 Sep. 2019 – June 2021 📍 Bengaluru, India

- Helped organise Hacktoberfest 2019 events at PESU.
- 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.

PROJECTS

browser-history

📍 PES Open Source

- Open Source Python Package for retrieving any browser's history.
- Over 100 pull requests, 17,000 downloads on PyPI.
- Presented the project at PyCon India 2020 and 2021 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 speedup, using goroutines

gopy

A compiler for a subset of Go written in Python

spressolisp

A lisp interpreter written in Rust

michie

- A Rust attribute macro that adds memoization to a function.
- Co-authored in a mob programming fashion.

toipe

- A typing test terminal app written in Rust.
- Over 400 stars on GitHub.

skip-list

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

📅 July 2020

guntainer

ACHIEVEMENTS

🏆 **1st place at ISFCR CTF 1 & 2**
Capture-The-Flag hackathons conducted at PESU

🏆 **Grand Finale Winners at EY GDS Hackpions 2.0, 3.0 and 4.0**
National Level Hackathon

🏆 **1st place in the NuCypher track at ETHOdyssey**
Ethereum India 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

CGPA: 9.62/10.0.

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 | Rust | Golang | C | C++ | Julia | JavaScript
TypeScript | SQL

Open Source | Git | 2100+ contributions in the past year
CI/CD

Linux | Docker | Distributed Systems

Parallelization | CUDA

ANNs | PyTorch

• A minimal rootless container runtime on Linux.

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 (upto 3x speed up)

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