SAMYAK S SARNAYAK

Software Engineer

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EXPERIENCE

Software Engineer
Normalyze

Nov. 2023 – Present | Bengaluru, India

- Set up a Snowflake-based data processing pipeline, which is used for all data transformations in the SaaS product.
- Architected and implemented a **queue-based workflow system**, deployed on Azure Container Apps.
- Scaled the system to **10M+ files** scanned in a single account for a Fortune 50 customer.
- Architected and implemented a system for incrementally scanning Google Drive and Microsoft SharePoint/OneDrive files. Scaled to **10k requests** per hour. The system ensures that actual data stays on the customer's cloud.
- Part of the early (<5-person) SaaS team.

Software Engineer
Chaos Genius

Sep. 2021 – Oct. 2023 | Bengaluru, India

- Built a rule-based Snowflake **warehouse optimization** engine.
- Worked on cost-optimizing recommendations for SQL queries. Used by multiple customers, including a **Fortune 50** company.
- Set up, deployed and helped maintain two services, two internal (python) libraries and multiple internal tools.
- Managed several releases of both open source and proprietary products.
- Part of the early (<10-person) tech team.

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.

NLP Intern
RuleZero

July 2020 – May 2021 | Bengaluru, India

PROJECTS

browser-history

PES Open Source

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

OtterSql

- An embeddable, in-memory SQL Interpreter designed to be used in tests for SeaORM.
- Written in Rust. A part of SeaQL's Summer of Code 2022.

gopy

- A compiler frontend for a subset of Go written in Python.

toipe

- A typing test terminal app written in Rust.
- Over 500 stars on GitHub.

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.

likelang

- An experimental dynamically typed, function-first language.
- Made at the week-long langjam0002.

za-warudo lang

- A highly domain-specific language to procedurally generate 2D worlds.
- One of the winners at langjam0003.

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

Deep Learning 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

Winner at langjam0003
Systems with JT

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 Hackathons

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

CNR Rao Merit Scholarship
1st, 2nd, 3rd & 4th semester CSE

MRD Merit Scholarship
3rd, 4th, 5th, 6th & 7th semester CSE

EDUCATION

B.Tech. in Computer Science and Engineering

PES University

2018 – 2022 Bengaluru, India

CGPA: 9.62/10.0

Pre-University (Class 12)

Sri Kumaran Children's Home PU College

2016 – 2018 Bengaluru, India

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

Class 10 - ICSE

VLS International School

2014 - 2016 Bengaluru, India

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

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.

guntainer

- A minimal rootless container runtime on Linux.

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 GPU support (upto 3x speed up).

Other projects: https://github.com/Samyak2/

PUBLICATIONS

Analysis of Garbage Collection Patterns to Extend Microbenchmarks for Big Data Workloads

July 2022 PES University

- Presented at the WOSP-C workshop held at ICPE (International Conference on Performance Engineering) 2022.

Other research: https://samyak.me/research/

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