Anupam Pokharel

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EDUCATION

B.S. in Statistics & Machine Learning — Pittsburgh, PA | Graduated Dec. 2021

Carnegie Mellon

Dean's List with High Honors (F '20, S '21); 3.59 GPA (last two years)

Coursework: Imperative Computation, Functional Programming, Parallel & Sequential Data Structures & Algorithms, Intro. to Computer Security, Computer Vision, Modern Regression, Advanced Data Analysis, Intro. to Machine Learning, Intro. to Deep Learning, Computer Networks, Parallel Computer Architecture & Programming

WORK EXPERIENCE

IBM | Full-Stack Software Engineer — Austin, TX | Aug. 2022 -

Cloud

- Working as one of three members of a squad tasked with developing new features of, addressing problems with and requests for improvements on, and ensuring architectural and security/compliance standards are upheld for the IBM Cloud CLI (and its SDK used by other developers to create plug-ins); this mostly happens by way of submitting and reviewing pull requests on the program's codebase (in Go) and DevOps assets (in Groovy for Jenkins, YAML for Travis and Tekton, and Bash for all)
- Contributor to development in the "My Projects" section of the Cloud UI, implemented in a mix of client-side- and server-side-rendered items with GraphQL querying (facilitated by Apollo) for the data of React components

IBM | Software Developer — Poughkeepsie, NY | Feb. – Aug. 2022

Competitive Insights (which subsumed CPO from Summer 2021)

- Led a project on Power Systems: designing a fully automated stack for comparing shared processing adjustments by hypervisor firmware with resource-scaling by Openshift's HPA during erratic load surges created by a suite of bootstrapped applications and virtual user activity profiles that leveraged Summer 2021's work

IBM | Back-End Developer Intern — Remote | May - Aug. 2021

Competitive Project Office (CPO) in Cloud and Cognitive Software Division

- Mainly worked on a project to benchmark systems orchestrated by Openshift on two architectures – IBM z/Arch. and Intel x86 – during I/O- & CPU-bound workloads (executed using a containerized Flask upload/download microservice for IBM Aspera coded from-scratch), via Javascript code generating variable emulated user activity

CARNEGIE MELLON | Undergraduate Teaching Assistant — Pittsburgh, PA | Feb. - May 2021

Department of Math

- Led weekly recitations to review course material and co-conducted grading for the Spring 2021 offering of 21-120: Differential and Integral Calculus

PROJECTS

NUTR-EZ NUTRITION AID Project Exhibition (Devpost) — Python3, HTML | Sept. 2020

Leveraging statistical inference and ML techniques, this nutrition tool – supported by emulated server/storage on localhost – generates personally-tailored, profile-specific meal recommendations that adapt to user approval or critique

PARALLELIZED INFERENCE ON RNNS Project Exhibition (GH Pages) — C++, CUDA, bash | Dec. 2021

A project that explores the speedups attainable by parallelizing some parts of inference-time Recurrent Neural Network (RNN) computations, at varying extents of compromise on accuracy

SKILLS

Technologies and Professional Tools: Git and Github, Docker and Dockerhub, CI/CD (e.g. Jenkins and Travis), Cloud resource mgmt/provisioning (mostly on IBM Cloud & AWS EC2), Setup/use of hypervisors (z/VM), Container orchestration (k8s, Openshift)
Languages: C++, C, Go, Java, Javascript, React, Ruby, Shell scripting, Intel x86 Assembly, Standard ML of NJ, Python (frequent work with Numpy, Pandas, Flask, Requests, OpenCV, and PyTorch libraries), as well as more data-centric experience with R and SQL
Conceptual and Technical Proficiency in: Hardware virtualization, Networking protocols and security, RESTful principles and API design/use, Data structures & algorithms, Concurrency (threading, mutex, etc.), ML (high-dim. data & PCA, modeling, CV, etc.)