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)
- Helping develop a new section of the Cloud platform, with involvement across the stack
    - schemas and data exposure via APIs (to ensure compatibility with Ghost queries in calling code)
    - the rendering logic on the routes of the service's web UI (implemented in a mix of client-side- and server-side rendered React components, featuring GraphQL facilitated by Apollo)

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.)