

# 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) for CI/CD
- Helping develop a new section of the Cloud platform, with involvement across the stack
  - data schema and exposure via APIs (called in front-end code) hewing to propriety resource-tagging protocols
  - 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 (re-branding of 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.)