Mayank Jha

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Education

University of Massachussetts, Amherst — *Amherst, MA*

MS in Computer Science, GPA: 3.83/4.0 — *August 2019 - Present*

National Institute of Technology, Durgapur — *Durgapur, WB, India*

B.Tech in Computer Science and Engineering, GPA: 8.48/10.0 — *July 2011 - July 2015*

Skills

Languages	Go, Python, JavaScript, C++, C, Java
Frameworks	Linux, Kubernetes, Docker, PyTorch, Tensorflow, PostgreSQL, MySQL, HDFS, Prometheus, Jenkins, Ansible
Web Platforms	Gitlab, AWS, GCP

Experience

NVIDIA — *Santa Clara, CA*

Software Engineer Intern — *May 2020 - Sep 2020*

- Worked on **AIStore** (https://github.com/NVIDIA/aistore) a distributed storage system tailored for peta-scale deep learning systems, written in **Go**
- Co-created the ETL pipeline support (analogous to Spark) for running machine learning workloads (**PyTorch**, **Tensorflow**) using containers on **Kubernetes**.
- Created a development environment for local playground and debugging on **Kubernetes**, using **Minikube**

Carousell — *Singapore*

Senior Software Engineer — *Aug. 2017 - Aug. 2019*

- Helped develop the Ads platform for serving ads on the application. Contributed to the making the product robust and resilient. Facilitated the growth of the backend engineering team from 2 to 6.
- Mentored the incoming engineers on efficient and sustainable coding practices. Developed it from scratch in **Go**.
- Built and scaled the ad-tech infrastructure on **Kubernetes** using Google Cloud.
- Used **Jenkins** for job scheduling and briefly used **Terraform** for infrastructure management.
- Heavily used and developed **Prometheus** plugins for maintainance of **Grafana** dashboards.

Flipkart — *Bengaluru, Karnataka, India*

Software Development Engineer 2 — *May. 2018 - Aug. 2018*

- Designed and implemented a virtual testing framework for our load balancer service, by making a mock of the entire data center. Used **MiniNExt** library for emulating the network switches, protocols etc. The framework was built in **Python**.
- Designed and implemented the Health Check Service in **Go** for the Software load balancer
- Used **Bash** scripts for maintenance of scripts around **Haproxy**.
- Used **Ansible** jobs for orchestration of configs around the Baremetal servers.

Google — *Remote*

Summer of Code Intern — *May. 2014 – Aug. 2014*

- Worked with the Fedora Project, to build a cached Bug tracking system, called Bugspad. Used **Redis** as the cache, and **Go** as the framework.

Projects

Serverless Computing on Edge

- Studying serverless computing as an alternative to modern day cloud needs and studying the effect of serverless computing on edge platforms. Deployed an open source serverless framework on a **jetson nano**/**raspberry pi** and **rock64** clusters. Conducted various experiments to make serverless computing possible in mobile phones.

CAVE: Cache for 360 degree videos

- Designed and built a cache (part of lab) that intelligently optimizes allocation across a set of videos taking into account video content, size, and popularity. Our experiments using realistic video workloads shows CAVE improves cache hit-rates, and thus network saving, by up to 50to up to two thousand videos per edge cache.