HAYK STEPANYAN

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EXPERIENCE

Google — Sunnyvale, CA
Software Engineer — *April 2024 - Present*
- Machine learning and data solutions for faster and more reliable hardware qualification at the Google Cloud data centers

College of Computing, Georgia Tech — Atlanta, GA
Undergraduate Researcher — *Aug 2021 - Dec 2023*
- Worked on the GTSfM (Structure from Motion) project advised by *Prof. Frank Dellaert*
- Built and fine-tuned an AI cluster using Dask to distribute GTSfM computations across multiple machines
- Designed and implemented a centralized logging system to track processes on the cluster
- Optimized 3D scene reconstruction algorithm (machine learning) runtimes by 20%

Google — Sunnyvale, CA
Software Engineer Intern — *May 2023 - Aug 2023*
- Built a flag synchronization library, preventing flag mismatch related production incidents
- Wrote a pull request synchronization feature that aligns the release's PR number with the load tests
- Implemented a library to split flags based on flavors and regions enabling load testing with selected flags on different virtual machine controllers
- Reduced production-related outages by 7% and improved maintainability of the load testing framework

Meta — Menlo Park, CA
Software Engineer Intern — *May 2022 - July 2022*
- Built end-to-end personalized video generators for the Facebook Group Reels distribution
- Developed a user interest based Group Video generator for the Facebook Watch Tab
- Implemented an originality-controlled Group Video generator for In-Feed Recommendations
- Increased group reels watch time by 0.5% ($\approx$12 million more user exposures)

HiLearn — Yerevan, Armenia
Research Engineer — *Feb 2021 - Aug 2021*
- Researched machine learning models for long-term market (stocks, bonds, funds) simulation
- Created Jupyter notebooks to investigate and compare different portfolio management techniques
- Developed APIs to integrate research results in production using Flask

PUBLICATIONS

Ayush Baid, John Lambert, Travis Driver, Akshay Krishnan, **Hayk Stepanyan**, Frank Dellaert (2023). *"Distributed Global Structure-from-Motion with a Deep Front-End"*. arXiv preprint: *arXiv:2311.18801v1*

PROJECTS

Object Detection Web Application
- Trained an SSD neural network model to detect objects using TensorFlow Object Detection API
- Processed the images using OpenCV and NumPy
- Achieved 94% detection accuracy for 97 different types of objects
- Designed and created the back-end of the web application in Flask to demonstrate the model in real-time

EDUCATION

Georgia Institute of Technology — Atlanta, GA
Bachelor of Science in Computer Science — *Aug 2020 - Dec 2023*
- Concentrations: Artificial Intelligence and Embedded Devices

SKILLS

- **Technical** - Python, Java, JavaScript, Ruby, Dask, React Native, C++, C, SQL, Firebase, Git, Linux
- **Languages** - Armenian, English, Russian, Spanish