

HAYK STEPANYAN

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EDUCATION

Columbia University

Master of Science in Computer Science

- Concentration: Machine Learning

New York, NY

Aug 2025 - May 2026

Georgia Institute of Technology

Bachelor of Science in Computer Science

- Concentration: Embedded Devices and Artificial Intelligence

Atlanta, GA

Aug 2020 - Dec 2023

EXPERIENCE

Google

Software Engineer

Sunnyvale, CA

Apr 2024 - Aug 2025

- **Research:** Led engineering of a multilingual dataset of 2M cultural artifacts to benchmark LLMs, streamlining Gemini's ability to evaluate cultural understanding and mitigate cultural biases across 7 dimensions.
- **Cloud:** Scaled a high-performance C++ service for multi node GPU testing, enabling 150+ internal users to process 10K+ qualification tests and accelerate scalability of new hardware.
- **Cloud:** Created statistical anomaly-detection models with an integrated data pipeline for TPU/GPU qualification testing, reducing issue triage time from 1 week to under 4 hours.

College of Computing, Georgia Tech

Undergraduate Researcher

Atlanta, GA

Aug 2021 - Dec 2023

- Developed scalable infrastructure for the GTSfM (Global Structure from Motion) framework under *Prof. Frank Dellaert*, establishing large-scale 3D reconstruction experiments.
- Prototyped and optimized a distributed AI compute cluster using Dask, lowering reconstruction runtimes by 5x through parallelized GTSfM computations across multiple machines.
- Designed and implemented a centralized logging and monitoring system, accelerating debugging and improving reliability of large-scale experiments.

Google

Software Engineer Intern

Sunnyvale, CA

May 2023 - Aug 2023

- Reduced production-related outages by 7% and enhanced maintainability of load testing framework by building a flag synchronization library, adopted by 3 engineering teams for safer deployments.
- Created an automated pull request synchronization feature aligned release identifiers with load tests, reinforcing deployment traceability and decreasing manual synchronization time by 50%.
- Implemented a library to split flags based on flavors and regions, supporting load testing with selected flags on different virtual machine controllers, allowing more granular load testing across 100+ multi-region VMs.

Meta

Software Engineer Intern

Menlo Park, CA

May 2022 - July 2022

- Increased Facebook Group Reels watch time by 0.5% (12 million additional user exposures) by developing end-to-end personalized video generators for Group Reels distribution.
- Built a user interest-based Group Video generator for the Facebook Watch Tab, leveraging user behavior signals to enhance content relevance and engagement.
- Designed and deployed an originality-controlled Group Video generator for In-Feed Recommendations to ensure content diversity and cut down repetition by 15%.

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*

SKILLS

Python, C++, SQL, PyTorch, TensorFlow, Pandas, NumPy, Dask, Docker, Hugging Face, Azure, GCP.