Klint Qinami

#### EXPERIENCE

#### Meta Platforms, Inc.

Software Engineer

• Machine learning systems engineer, working on compilers, frameworks, and kernels for in-house training and inference accelerators (MTIA), as part of the PyTorch AI framework organization

# Qualcomm, Inc.

Staff Software Engineer

- Machine learning compiler developer for a multi-threaded VLIW DSP with wide-vector SIMD
- Replaced several thousand lines of quantized subgraph pattern matching with a generic graph traversal
- Implemented bandwidth-maximizing LRU scheduling for cross-core communication
- Significant contributions in every area of the compiler: lazy evaluation DSL for the model loader, custom high-performance attention kernels, generic tiling and scheduling infrastructure, 6 bit block weight compression
- Made a lead and a code owner (graph transformations) in less than a year (unusual!)

#### **Reservoir Labs, Inc.**

Senior Software Engineer

- Lead developer on +\$1M SBIR automating run-time software verification
- Architected and implemented polyhedral compiler integration with TVM
- Wrote non-affine CSE pass that made polyhedral compile time of BERT feasible

#### Princeton University, Visual AI Lab

Ph.D. Student

- Achieved two publications in top-tier conferences as a first year Ph.D. student
- · Developed debiasing method for vision classifiers that outperformed adversarial debiasing

# Columbia University, Graphics Group

Undergraduate Researcher

- Derived a knot-untangling optimization based on linking numbers, used for successful grant proposals by advisor
- Helped pilot a new graduate geometry processing course by creating assignments from research papers, and TA'ed the course (as an undegrad)

# EDUCATION

#### University of Texas at Austin

Master of Science in Computer Science

# **Columbia University**

Bachelor of Science in Computer Science

Select graduate-level coursework: Machine Learning, Programming Languages, Operating Systems, Quantum Computing, Algebraic Topology, Databases, Partial Differential Equations, Modern Algebra, Differential Geometry, Probability Honors & Awards: Thompson-Muñoz Scholar, Tau Beta Pi, Engineering Honors Society, Dean's List of Distinguished Students, all semesters

*Teaching Assistant*: Linear Algebra, Computer Animation, Geometry Processing, Combinatorics and Graph Theory

# PUBLICATIONS

Zeyu Wang, **Klint Qinami**, Yannis Karakozis, Kyle Genova, Prem Nair, Kenji Hata, and Olga Russakovsky. Towards fairness in visual recognition: Effective strategies for bias mitigation. In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.

Kaiyu Yang, **Klint Qinami**, Li Fei-Fei, Jia Deng, and Olga Russakovsky. Towards fairer datasets: Filtering and balancing the distribution of the people subtree in the imagenet hierarchy. In *ACM Conference on Fairness, Acountability and Transparency (ACM FAccT)*, 2020.

# Skills

*Programming Languages*: C++, Python, C, Java, Rust, OCaml, Matlab, Javascript, SQL, HTML / CSS *Software*: PyTorch, MLIR, Triton, TensorFlow, Cuda, TVM, LLVM, Glow, OpenMP, Gurobi, Mosek, LibIgl, Eigen, Git, Mercurial, GDB, Valgrind, Cachegrind, Mathematica, Unix, PreForm, Docker, Slurm, Flame Graphs, Bash, Lager St. (2010)

Jan. 2020 — Nov. 2021 New York, N.Y.

Sep. 2018 — Aug. 2019 Princeton, N.J.

Jun. 2016 — May 2018 New York, N.Y.

Sep. 2024 — Present GPA: N/A

Sep. 2014 — May 2018 GPA: 3.9/4.0

Jul. 2024 — Present New York, N.Y.

Nov. 2021 — Jun. 2024

New York, N.Y.