

Tristan Konolige

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Seattle, WA

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TECHNICAL STRENGTHS

Computer Languages

C++, Python, Rust, Haskell, Julia, CUDA

Areas of focus

Linear System Solvers, Machine Learning, Compilers,
High Performance Computing, Distributed Memory Algorithms, Multigrid

EXPERIENCE

OctoML

July 2020 –

Principal Engineer

Seattle, WA

- Technical lead for group of 5 working on improving performance of customer ML models
 - Improved performance of customer models past what they could achieve in-house
 - Mentored teammates on how to diagnose slow models and make improvements from the graph level down to the kernel level
- Implemented state of the art CPU and GPU kernels for matrix multiplication, random number generation, and sparse linear algebra in a cross-platform IR
- Large open source contributions to tooling and profiling in Apache TVM (tuning ML compiler)
 - Added C++ backtraces to crashes and errors
 - Ensured that benchmarking was accurate and consistent across CPU and GPU
- Evaluated applicability of multiple research papers to improve tuning speed

University of Colorado Boulder

January 2015 – May 2020

Research Assistant, PhD Student

Boulder, CO

- Researched algorithms for large scale network analysis (received best paper award at PASC ‘18)
- Improved state of the art performance on large nonlinear optimization problems in computer vision

Arraiy

Summer 2018

Software Engineer

Palo Alto, CA

- Improved performance of 3D reconstruction via faster nonlinear optimization algorithms

Past: Lawrence Livermore National Lab, Intern ‘16; Research assistant in UCSB CS labs; Industrial Perception, Inc, Software Engineer.

EDUCATION

University of Colorado at Boulder

Fall 2015 – Spring 2020

Ph.D. in Computer Science

University of California, Santa Barbara

Fall 2011 – Spring 2015

B.S. in Computer Science