

Logan Weber

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Education

University of Washington

COMBINED B.S./M.S. IN COMPUTER SCIENCE

- Advisor: Zachary Tatlock
- Mentors: Jared Roesch and Tianqi Chen
- Research Focus: Programming Languages, Machine Learning, and Systems

Seattle, WA

Sep. 2014 - June 2020

Research Projects

Relay Dashboard

MACHINE LEARNING BENCHMARKING AND ANALYSIS FRAMEWORK

- Aided design and development of a system for performing scalable and reproducible machine learning experiments in a language-agnostic fashion.

Seattle, WA

June 2019 - PRESENT

MicroTVM

DEEP LEARNING ON BARE-METAL DEVICES

- Wrote infrastructure in Apache TVM to support compilation and automatic optimization of machine learning models on microcontrollers.

Seattle, WA

Jan. 2019 - PRESENT

Apache TVM

OPEN DEEP LEARNING COMPILER STACK FOR CPUS, GPUS, AND SPECIALIZED ACCELERATORS

- Became the 8th most impactful contributor (by lines of code modified) out of 300+ contributors, as of 11/30/2019.
- Was awarded reviewer status by the TVM community.

Seattle, WA

Feb. 2018 - PRESENT

Relay

FUNCTIONAL AND DIFFERENTIABLE IR FOR MACHINE LEARNING

- Aided development of an intermediate representation featuring a tensor-oriented type system with a lightweight form of dependency.

Seattle, WA

Feb. 2018 - PRESENT

Judgement-Based Grading

CHROME EXTENSION

- Built a UI over Canvas's SpeedGrader interface to implement grading improvements based on the PI's prior educational research.

Seattle, WA

Jul. 2016 - Sep. 2016

Induction Tutor

WEB APPLICATION

- Built the first ever interface for both teaching induction to computer science students and for automating grading of induction proofs.

Seattle, WA

Apr. 2016 - Jul. 2016

Personal Projects

0x10c

RUST 3D GAME ENGINE

Seattle, WA

Sep. 2017 - Dec. 2018

Exort

JAVA 3D MOBA ENGINE PROTOTYPE

Ellensburg, WA

Mar. 2014 - Oct. 2014

ModernGL

JAVA LIBRARY FOR OpenGL 3.0+

Ellensburg, WA

Mar. 2014 - July 2015

Junkbot

JAVA 2D PLATFORMER

Ellensburg, WA

Sep. 2013 - Dec. 2013

Tetris

JAVA NES TETRIS RECREATION

Ellensburg, WA

Apr. 2013 - June 2013

Java2D

JAVA 2D GAME ENGINE

Ellensburg, WA

Dec. 2012 - Mar. 2014

Fallborn

JAVA 2D DYNAMIC LIGHTING ENGINE

Ellensburg, WA

Apr. 2012 - May. 2012

Writing

Relay: A High-Level Compiler for Deep Learning

JARED ROESCH, STEVEN LYUBOMIRSKY, MARISA KIRISAME, **LOGAN WEBER**, JOSH POLLOCK, TIANQI CHEN, ZACHARY TATLOCK

ArXiv Preprint

2019

Relay: A New IR for Machine Learning Frameworks

JARED ROESCH, STEVEN LYUBOMIRSKY, **LOGAN WEBER**, JOSH POLLOCK, MARISA KIRISAME, TIANQI CHEN, ZACHARY TATLOCK

2018

Proceedings of the 2nd ACM SIGPLAN International Workshop on Machine Learning and Programming Languages (MAPL 2018).

Employment

Research Engineering Intern

Seattle, WA

OCTOML INC

September 2019 - December 2019

- Researched methods for running and optimizing machine learning models on microcontrollers.

Graduate Research Assistant

Seattle, WA

UNIVERSITY OF WASHINGTON, PLSE AND SAMPL LABS

June 2019 - August 2019

- Researched methods for performing and analyzing machine learning experiments in a reproducible and scalable manner.

Software Engineering Intern

Santa Clara, CA

NVIDIA, GRAPHICS DRIVERS TEAM

September 2018 - December 2018

- Created a tool to visualize arbitrary hierarchical temporal data (e.g., to visual graphics driver performance, kernel thread scheduling, and lock contention).

Software Engineering Intern

Pittsburg, PA

DUOLINGO, CORE LEARNING TEAM

June 2018 - September 2018

- Researched methods to more accurately assess learners' language proficiency.

Software Engineering Intern

Mountain View, CA

GOOGLE, ANDROID CAMERA TEAM

June 2017 - September 2017

- Contributed to several open source projects for Android camera testing.

Undergraduate Research Assistant

Seattle, WA

UNIVERSITY OF WASHINGTON, BLANK LAB

March 2016 - June 2017

- Built educational infrastructure for upper-level computer science courses.

Teaching Assistant

Seattle, WA

UW CSE DEPARTMENT

March 2016 - June 2019

- Assisted teaching and grading for upper-level computer science courses.

Hay Baler & Equipment Technician

Ellensburg, WA

CHARLTON FARMS INC

June 2014 - September 2015

- Coordinated with 2-10 other equipment operators to strategically prepare/bale 1000 acres of hay under 90-hour work weeks.

Presentation

TVM Conference 2019

Seattle, Washington, USA

PRESENTER FOR μ TVM

December 2019

Arm Research Summit

Austin, Texas, USA

POSTER PRESENTER FOR μ TVM

September 2019

TVM For Fun and Profit Tutorial at ISCA 2019

Phoenix, Arizona, USA

PRESENTER FOR μ TVM

June 2019

Paul G. Allen School of Computer Science Research Poster Fair

Seattle, Washington, USA

POSTER PRESENTER FOR RELAY (2ND PLACE)

May 2019

Teaching

CSE 451, Introduction to Operating Systems

University of Washington

TEACHING ASSISTANT

March 2019 - June 2019

CSE 490Q, Introduction to Quantum Computing and Quantum Programming in Q#

University of Washington

TEACHING ASSISTANT

January 2019 - March 2019

CSE 410, Computer Systems

University of Washington

TEACHING ASSISTANT

March 2018 - June 2018

CSE 311, Foundations of Computing I

University of Washington

TEACHING ASSISTANT

March 2017 - June 2017

CSE 332, Data Structures and Parallelism

TEACHING ASSISTANT

University of Washington

January 2017 - March 2017

CSE 332, Data Structures and Parallelism

TEACHING ASSISTANT

University of Washington

September 2016 - December 2016

CSE 311, Foundations of Computing I

TEACHING ASSISTANT

University of Washington

March 2016 - June 2016

Skills

Rust | Python | C | C++ | Haskell | Java | LaTeX | Bash
VSCode | Vim | Spacemacs | IntelliJ | Git