Marisa Kirisame

Education

2015–2019 **Bachelor**, *University of Washington*, Seattle, GPA 3.28.

Experience

2015–2019 **PLSE**, *Seattle*, Undergraduate Researcher.
Worked on Cassius and Verdi at freshman. Gained some research experience.
Worked on Astraea, continued working on DDF at sophomore.
Worked on relay at junior/senior.

2017 **MSRA**, *Beijing*, Summer Intern.
Worked on Deep Learning (knowledge distillation) using pytorch and tensorflow.

2016 **Thoughtworks**, *Beijing*, Summer Intern.
Worked on DDF.

Project

tvm (C++) Top 20 contributor, working on relay for over 1 year. implement adt, ad, reference, pretty printing, ahead-of-time compiler that compile relay code to C++ code, contributed to type checking, currently working on an partial evaluation pass.

happy-tree (Haskell) A polytypic decision tree that work on any algebraic data type that can be expressed as True-Sums-Of-Products

ordinary (Haskell) A small web game to teach programming. used frp, nix, zipper, and ghcjs.

PE (MetaOcaml) STLC with ref/product/sum with bidirectional type checking, partial evaluation, automatic differentiation, working on compilation to ocaml via staging. a prototype for tvm-relay PE.

DDF (Haskell) A Higher order Deep Learning Framework for differentiable programming, using final-tagless and templatehaskell.

Astraea (Coq) Try to bring equality satruation to compcert, a verified c compiler in coq.

Prover (C++) A automated theorem prover for first order logic that use Gentzen's sequential calculus, and implemented the AST using GADT using template metaprogramming in C++. Also implemented multiple search algorithm in AIMA, and the constrainted satisfication problem solver with arch consistency optimization algorithm.

Coursework

- Programming Language, Graduate TCS
- Advanced Computer Architecture
- Deep Learning
- OS
- Database
- System for Machine Learning

Publications

[1] Jared Roesch, Steven Lyubomirsky, Logan Weber, Josh Pollock, Marisa Kirisame, Tianqi Chen, and Zachary Tatlock. Relay: A new IR for machine learning frameworks. *CoRR*, abs/1810.00952, 2018.

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