Seattle, WA
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Job Hernandez Lara

Skills

Languages Common Lisp, Python, JavaScript, Haskell, C++

Tech Django, DjangoRestFramework, ReactJS, Docker, AWS, Linux command line, Git, Emacs

Other Experience working on open source compiler systems (i.e., LLVM), Proven C++ skills as demonstrated through my LLVM contributions

Projects and Open Source Participation

March 2024 - current **LLVM**, *Open Source Contributor, A compiler used by thousands of devs and big companies such as Meta, Google, Apple, Nvidia*, written in C++

- Added floating point multiplication to LLVM's standard C library (C23). See contribution here. See blog post here.
- Added support and extended the C programming language with new floating point fmaximum and fminumum functions and variants. See contribution here.
- Recognized for my fmaximum and fminimum functions on the LLVM weekly newsletter.
- Added 9 floating point functions to the LLVM C standard math library, increasing coverage of the C standard math library by 3.7 percent.
- Explored and worked inside of an unfamiliar and complex codebase to enhance compatibility with the new standard (C23) for the C programming language.

Jan 2024 **x86 Compiler**, *Author, A compiler for a small language that generates x86-64 assembly and C, written in Haskell*

- Implemented tuple compilation. This involved thinking in binary since this required interfacing with the garbage collector.

Dec 2023 - Jan 2024 **Deep learning compiler**, *Author, A deep learning compiler, written in Python*

- Investigated how production deep learning compilers (e.g., TVM) work and applied my findings to compile a Pytorch convolutional neural network to C. See project here. See blog post here.

April 2023 - June 2023 **Coalton**, *Open Source Contributor, A production quantum computing language, written in Common Lisp*

- Added automatic differentiation (calculus) to the standard library. See original PR here. See merge here. See blog post here.

Interests

I like to study advanced math.

I write a technical blog: How CPU architecture works.

Education

2012-2013 Western Washington University