Seattle, WA
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jobhdez.github.io
jobhdez

Job Hernandez Lara

Software developer by passion, looking to transition from the food service industry to software engineering.

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 production systems, Experience deploying web apps with docker and AWS

Projects and Open Source Participation

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

- Added support and extended the c23 standard library with new math functions. See contribution here.
- Involved in the software engineering review process.

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

- Added automatic differentiation (calculus) to the standard library. See contribution here. See blog post here.
- Picked up Coalton quickly and made a non trivial contribution without hand holding.

Dec 2023 - March 2024 **SchemeWeb**, *Author, A Scheme interpreter behind a Django API, written in Python*

- Implemented a Scheme interpreter. This involved recursion over a tree data structure and gave me a better understanding of computation. See project here. See blog post here.

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, i.e., involved research into the functionality of and emitting code to interface with the garbage collector.

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

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

May 2023 **Lalg Social Media**, *Author, A social media web service where people share linear algebra expressions, written in Python3, Django, Redis, Celery, RabbitMQ*

- Developed a linear algebra library and linear algebra interpreter allowing the social sharing of linear algebra expressions. See Project on Github.
- Implemented back-end concepts such as caching, message queue, distributed task queue.

Interests

I like to study advanced math.

I write a technical blog: How Facebook scaled Memcache, How the Internet works.