

# Job Hernandez Lara

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*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, Able to work across the stack, Experience deploying web apps with docker and AWS

## Projects and Open Source Participation

- Jan 2024 **An 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.
  - Implemented an analogous university 3 month class based compiler project in one week independently. See project [here](#).
- April 2023 - current **Coalton Programming Language**, Contributor, *A production quantum computing language, written in Common Lisp*
  - Added automatic differentiation (calculus) support, making Coalton the first language to support dual numbers in its standard library. See contribution [here](#). See blog post [here](#).
  - Added support for the detection of unsigned arithmetic underflow. See contribution [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 sharing of linear algebra expressions. See [Project](#) on Github.
  - Implemented back-end concepts such as caching, message queue, distributed task queue.
- Nov 2022- Jan 2024 **Compiler Web Service**, Author, *A web service consisting of several compilers, written in Common Lisp, JavaScript, ReactJS, PostgreSQL*
  - Developed and deployed a compiler web service See [Project](#).
  - Improved the performance of one of the compilers by implementing loop optimizations.
- Jan 2021- June 2022 **Scholarship Website**, Contributor, *A scholarship website finder, written in JavaScript, ReactJS, MUI*
  - Instrumented test coverage and increased coverage by 18 percent.
  - Shipped and implemented 15 github issues by systematically investigating the code base.

## Interests

I like to study advanced [math](#).

I write a technical blog: [How Facebook scaled Memcache](#), [How the Internet works](#).