

# IAN HORN

[horn.imh@gmail.com](mailto:horn.imh@gmail.com) ◇ [linkedin:ianhorn](https://www.linkedin.com/in/ianhorn) ◇ (650)·544·4676 ◇ [imh.github.io](https://imh.github.io)

Experienced ML generalist with a strong track record of leading projects through their lifecycle as engineer, data scientist, and occasionally PM. I've had a lot of impact by taking initiative on problems that are falling through the cracks.

## PROFESSIONAL EXPERIENCE

---

### Stitch Fix

2015 - Present

*Senior Machine Learning Engineer*

*San Francisco, CA*

**Seven years of personalized fashion spanning NLP, causal inference, CV, and recsys.**

#### *Selected Highlights:*

- Built long-missing infrastructure for image data. It was immediately adopted by several teams and now powers the org's CV work.
- Enabled new kinds of recommendations on our home page by collecting new datasets and building novel CV models on them. I also built the recommender for this.
- Combined causal inference and supervised learning to automatically intervene before bad shipments reached clients.

### Swift Navigation

2013 - 2015

*Lead R&D Engineer (First employee)*

*San Francisco, CA*

**Embedded estimation algorithms for high precision GPS systems**

- Developed algorithms for real-time localization with 1 cm precision.
- Implemented estimation algorithms on resource-constrained embedded platforms.
- Developed software-in-the-loop backtesting framework for model validation.

### Remilon, LLC (now [Study.com](https://www.study.com))

2012 - 2013

*Technical Data Analyst*

*Mountain View, CA*

**Constrained optimization for ad ranking**

- Built a contextual bandit that formed the backbone of our company's ad ranking system for years.
- Wrote numerical optimization code for fast large scale model fitting.
- ETL, dashboarding, and experimental analysis.

### Joby Energy (now [Joby Aviation](https://www.joby.com))

2009 - 2011

*Systems Engineer*

*Santa Cruz, CA*

**Statistics and optimization for eVTOL (flying cars)**

- Designed aircraft propellers using numerical optimization methods.
- Developed physical simulation of aircraft.
- Performed experimental statistical validation of aircraft wings and propellers.

### UC Santa Cruz ([Santa Cruz Institute for Particle Physics](https://www.santacruzparticlephysics.org))

2006 - 2008

*Research Assistant*

*Santa Cruz, CA*

**Electrical engineering support for a particle detector at CERN/LHC**

- Didn't create any planet-destroying black-holes.

## SELECTED SIDE PROJECTS

---

- **Diffusion-based LLMs for writing sci-fi novels**, focused on efficiently expanding context length.
- **Probabilistic programming DSL**, analogous to autograd for PGMs.
- **Program induction**. A small lambda calculus + deep RL = learning programs from data.
- [Hipsterplot](https://github.com/ianhorn/hipsterplot): A ridiculous ASCII plotter that is somehow my most popular project on github.

## EDUCATION

---

University of California, Santa Cruz

B.S. Applied Physics

*Thesis:* Inferring rates of unobserved transitions in a 1D continuous Markov process