

IAN HORN

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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

Senior Machine Learning Engineer

2015 - Present

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

Lead R&D Engineer (First employee)

2013 - 2015

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](#))

Technical Data Analyst

2012 - 2013

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](#))

Systems Engineer

2009 - 2011

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](#))

Research Assistant

2006 - 2008

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 LMs 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**: 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