

CONNER DIPAOLO

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EXPERIENCE

Yelp – *San Francisco, CA*

June 2019 - Present

Machine Learning Engineer – Pricing and Revenue Optimization

- Automated common Redshift analytics requests from enterprise sales associates, reducing turn-around time by 99.9% (4 days to 5 minutes) and saving the company 66.5% of the wages spent on the old, manual pipeline.

Jet Propulsion Lab – *Pasadena, CA*

June 2018 - August 2018

Research Intern – Deep Space Optical Communications

- Mathematically developed improved statistical algorithms for ground communications receiver control which are currently implemented in hardware and slated to join the 2022 Psyche mission to an asteroid near Mars.

Yelp – *San Francisco, CA*

May 2017 - August 2017

Machine Learning Intern – Advertisement Optimization

- Architected a GPU-trained PyTorch-based deep learning model used to select between millions of ad photos.
- Generated a statistically significant 4.5% lift in advertisement click-through rate over status quo photo selection.

Yelp – *San Francisco, CA*

May 2016 - August 2016

Machine Learning Intern – Spam and Hate Speech Detection

- Increased out-of-sample Matthews Correlation of a spam detection model by 25.7% over the status quo model on points detected by humans as ‘difficult to classify’ by running a principled model search.
- Primary author of a service marshalling over 350,000 Kafka messages/day into MySQL tables for four teams.

PUBLICATIONS

A Randomized Algorithm for Preconditioner Selection

arxiv.org/abs/1908.00633

By Conner DiPaolo and Weiqing Gu. Submitted. August 2019.

- Derived a practically efficient randomized algorithm for a previously difficult preconditioner selection problem.
- Created state-of-the-art preconditioned solver for kernel regression using our preconditioner selection algorithm.

Signal Intensity Deconvolution in Optical Receivers

doi.org/10.1109/LCOMM.2019.2912382

By Conner DiPaolo and Ryan Rogalin. IEEE Communications Letters. July 2019.

- Developed the first consistent algorithm for estimating the center of a discretized communications beam.
- Proved non-asymptotic error bounds for the sub-problem of signal/background intensity deconvolution.

OPEN SOURCE

GOML

github.com/cdipaolo/goml

Creator - Second most starred Golang machine learning library on Github with > 1,000 stars.

- Developed the only ML library using Golang data channels to train models in an online and parallelizable way.

SKILLS

Programming Languages: Python, SQL, R, Golang, Matlab

Tools & Technologies: Numpy, SciPy, Pandas, Git, Redshift, SciKit-Learn, PyTorch, Apache Spark

EDUCATION

Harvey Mudd College – *B.S. Mathematics with Departmental Honors*

3.84 GPA, 3.88 In-Major GPA

HMC Mathematics Awards: *Giovanni Borrelli Prize, Chavin Prize, Courtney S. Coleman Prize*