CONNER DIPAOLO

cdipaolo.github.io – cdipaolo96@gmail.com – (949) 300 3774

EXPERIENCE

Yelp – *San Francisco, CA* June 2019 - Present
Applied Scientist – Pricing and Revenue Optimization

- Initiated and led company-wide transition towards more efficient statistical estimators to measure subscriber retention and revenue, which decreased A/B test runtime by 15 days (12-16% faster than the status quo.)
- Led a multi-team project to optimally allocate advertisers' budgets to marketplaces, engineering data processing software with Apache Spark, and working with stakeholders to frame business goals into optimization problems.

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 and productionized a deep learning model used to select between millions of advertisement 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 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. Pre-print. 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, Apache Spark, Redshift, Git, SciKit-Learn, PyTorch

EDUCATION

Harvey Mudd College – *B.S. Mathematics with Departmental Honors* *3.84 GPA, 3.88 In-Major GPA*