cody wild

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education

2017 **CERTIFICATE IN APPLIED DEEP LEARNING** | **University of San Francisco**

2014-15 **M.S. ANALYTICS** | **University of San Francisco**

2010-14 **B.S. MATHEMATICAL ECONOMICS: SUMMA CUM LAUDE** | **Tulane University**

employment

10/2017-01/2019 **SENIOR DATA SCIENTIST** | **Sophos Antivirus**

Designing and testing deep learning architectures to detect malicious digital content, with a focus on hierarchical architectures and auxiliary loss engineering

05/2015-09/2017 **DATA SCIENTIST** | **LendUp**

Built, evaluated, and implemented machine learning models to support credit scoring and fraud detection, with additional particular focus on model explanation and anomaly detection.

projects

2018-2019 **MULTICLASS WEBSITE CLASSIFICATION RESEARCH** | **Sophos**

- Part of a team researching solutions to a low-data, multi-class classification problem.
- In the support of research questions, implemented active learning methods, an attention-based URL encoder mechanism, and a novel semi-supervised method in Python/Pytorch
- Authored and gave an accepted talk at CAMLIS on a novel clustered loss function used to integrate asymmetric costs of misclassification in a multi-class setting

2017-2019 **MACHINE LEARNING EXPLANATION BLOG** | **Independent**

- Author of a well-respected blog focused on explaining ideas and exploring questions within deep learning
- In-depth posts on topics including VAE representation learning, meta learning, graph convolutions, and TRPO
- Additionally published >50,000 words on ShortScience summarizing 50+ recent ML papers in the last year

2018 **PORTABLE EXECUTABLE MODEL IMPROVEMENT RESEARCH** | **Sophos**

- Proposed adding a non-binary auxiliary loss, which generated one of the highest performance boosts
- Built Python framework for easy calculation of metrics across score structures (multi-class, multi-label)

2017-2018 **HIERARCHICAL SHARED WEIGHT HTML DETECTION PAPER** | **Sophos**

- Author on paper, accepted into the S&P Deep Learning in Security workshop, on a neural network design using shared weights over document aggregations at multiple resolutions for HTML detection
- Helped design and Keras implement networks to test the value of architectural choices
- Gave paper talk at S&P conference in May 2018

2016 **DECISION EXPLANATION LITERATURE REVIEW** | **LendUp**

- Made a survey of current state of the art in model explanation techniques to support compliance team
- Specifically tested LIME and feature perturbation analysis
- Built a Numpy-optimized Python implementation of a feature perturbation explanation system.

2015-2016 **SUBSPACE CLUSTERING FOR ANOMALY DETECTION** | **LendUp**

- Researched methods to detect high-density anomalies with multivariate, categorical, time series data
- Designed, implemented, and launched a time-series variant of CLICKS, a subspace clustering technique