

Owen Fish

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Pursuing a M.S. in Computer Science with a specialization in Computational Operations Research. Expected graduation December 2020. My interest is in software engineering of large-scale machine learning systems. Further information is available on my website (www.owencfish.com) and my Github (www.github.com/OwenFish)

PROJECTS

Knowledge Base Completion

Research at William & Mary's DataLab to apply novel deep graph-based learning methods to entity classification and link prediction in an incomplete knowledge graph. Currently have a model with 92% accuracy (SOTA 96%); continuing project for academic credit.

Chicago Market Exchange Prediction

Working with a PhD-led team to build an object-oriented system to ingest, analyze, and manipulate multiple feeds of extremely large-scale data; introduced a trading strategy achieving ~65% binary accuracy; implemented robust testing infrastructure for general trading strategies.

Baseball Hit Prediction

Built and continue to maintain a machine learning system to predict if player X will get a hit off of player Y. System finds all hitter-pitcher matchups in each game and outputs favorable matchups.

EDUCATION

College of William & Mary, 2019 - Dec. 2020

M.S Computer Science - Computational Operations Research

On track to complete the degree in 18 months | gpa 3.52

College of William & Mary, 2015 - 2019

B.S Computational Applied Math & Statistics

Minor: Computer Science ; 3 Time Dean's List

EXPERIENCE

William & Mary Math Department — *Departmental Employee* Fall 2020

Tutor intro calculus and TA for MATH 410 - *Advanced Statistical Methods*

Marshall-Wythe School of Law — *Research Intern* Fall 2019

Research for the admissions department using machine learning methods to model the probability of matriculation for any given applicant; Presented reports to admissions staff.

ZestAI — *Software Engineer Intern* Summer 2019

Worked on the ZAML Software Project to make credit accessible and transparent; developed infrastructure with which machine learning models can be created; created over 50 R-Markdown templates for automated model documentation generation; created production-level code for isolated template development and testing environment

Radiant Solutions -- *Technologist Intern* Summer 2018

Worked on a small team to ingest, manipulate, and analyze extremely large scale data for a classified client project; built templates for data ingestion with Apache NiFi; refactored a large code base to reflect a large back-end refactoring; built tools for docker containerization.

REFERENCES

Rex Kincaid, PhD. Graduate Director, COR (rrkinc@wm.edu)

Jay Budzik, PhD. CTO, ZestAI (jaybudzik@gmail.com)

Joseph McMahon. Director of Engineering, Radiant Solutions. (joseph.mcmahon@radiantsolutions.com)

Technology Experience

Most Experience: Python; R; Java; LaTeX; Microsoft Excel; Git; SQL; Tensorflow

Some Experience: C; C++; Stata; AMPL; Flask; Spark; NiFi;

Dabbled In: HTML; CSS

Modeling Experience

Regression (Linear; Logistic; Ridge; LASSO; Random Forest)

Classification (K-NN; SVM; Random Forest) **Clustering**

(K-Means; Hierarchical); **Deep**

Learning (NN;

Relational-Graph Conv Networks; GAN; Graph

Attention Network); Gradient

Boosting; ANOVA; **Packages**

(Pandas; SK-Learn; NumPy;

TensorFlow)

RELEVANT COURSEWORK

Big Data (**IP**)

Analysis of Algorithms (**IP**)

Neural Networks

Database Management

Mathematical Statistics

Linear Regression

Network Optimization

Linear Programming

Integer Programming

M.L. Optimization

Bayesian Econometrics

OR: Stochastic Models

Data Mining

Linear Algebra