Cody Mazza-Anthony

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EDUCATION

MCGILL UNIVERSITY
MEng in Signal Processing

MCGILL UNIVERSITY
BS in Computer Science and Biology

SKILLS

Python (NumPy, Pandas, Scikit-learn)
Pyspark
SQL (Presto, MySQL)
Git
Leadership Experience
Convex Optimization
Product Analytics
Regression
A / B Testing

LINKS

Github:// **cmazzaanthony**
LinkedIn:// **cody-mazza-anthony**
Medium:// **cmazzaanthony**

PROJECTS

ccgowl: Gaussian Graphical Model
ccgowl is a Python library for estimating inverse covariance matrices when pre-existing structure exists between features.

coptim: Convex Optimization
coptim is a Python library for solving convex smooth/non-smooth objective functions.

ARTICLES

A Five-Step Guide for Conducting Exploratory Data Analysis

The Unbreakable Bayes' Theorem

Discrete random variables and PMFs explained using Python

Conditional Probability and The Triwizard Tournament

The Building Blocks of Probability Made Simple

Infinity Stones and Sample Spaces

SUMMARY

8+ years of experience in software engineering, machine learning, and algorithm design. 3+ years leading cross-functional teams.

EXPERIENCE

SHOPIFY | Senior Data Scientist

Aug 2020 - Present

- Data Science lead for Shopify Notebooks.
- Collaborated with multiple disciplines to launch the BFCM notebook which improved overall user engagement by 6%.
- Developed adoption, engagement, retention, and growth data models for all analytical products.
- Created a data-wide shop segmentation data model for analyzing product success.

SQUAREPOINT CAPITAL | Quantitative Researcher / Lead Quantitative Engineer

Jul 2016 – July 2020

- Supervised 3 research engineers in developing an Auto-ML framework which includes exploratory data analysis, model fitting, hyperparameter optimization and model interpretation.
- Designed and implemented objective functions for portfolio optimization.
- Developed regression model for a long-short equity strategy surpassing previous benchmarks by 4%.
- Constructed an algorithm trading framework for volatility products.

MORGAN STANLEY | Software Engineer

May 2014 – Jul 2016

- Developed risk infrastructure and distributed computing grid for fixed income derivative products.
- Implemented shock and stress testing for fixed income derivatives.
- Delivered optimal Java server reporting engine to the Bank Deposits Team that manages $140 Billion in firmwide deposits.

MCGILL UNIVERSITY (PART-TIME) | Researcher

Jan 2016 – Jan 2018

- Worked with a team of three researchers to develop a Finite Mixture of Regression model with component selection.
- Implemented EM algorithm to estimate parameters. This includes smooth and non-smooth descent methods in the M-step.
- Lead simulation study for Poisson and Gaussian mixture models.

PUBLICATIONS

[1] C. Mazza-Anthony. Structured sparsity and precision matrix estimation. 2020.

[2] C. Mazza-Anthony, B. Mazoure, and M. Coates. Learning gaussian graphical models with ordered weighted l1 regularization. *IEEE Transactions on Signal Processing*, 69:489–499, 2020.

[3] M. R. Smaoui, C. Mazza-Anthony, and J. Waldispühl. Investigating mutations to reduce huntingtin aggregation by increasing htt-n-terminal stability and weakening interactions with polyq domain. *Computational and mathematical methods in medicine*, 2016, 2016.