

# HARRY EMERIC

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## EDUCATION

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### Stanford University

Stanford, CA

MS, Statistics (Data Science)

Sep 2018 - Jun 2020

- Coursework: Stochastic Methods, Statistical Inference, Modelling and Learning; Machine Learning, Deep Learning, Computer Vision, Software Engineering, Algorithms, Optimization
- Course Assistant: ME300A: Linear Algebra with Applications to Engineering

### University of Warwick

Warwickshire, UK

BSc, Mathematics and Economics

Sep 2005 - May 2008

- First class honours, winner of examiners' prize for best overall grade out of ~200 people

## EMPLOYMENT

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### Purple Pipelines

Miami, FL

Founder

Sep 2020 – Present

- Worked as quant in trading partnership to automate fundamental equity analysis, generating 189% return and 3.33 Sharpe Ratio over 6 months
- Built data collection and processing pipeline using python web scrapers and various APIs
- Developed and deployed web app with results, and analytics stream sending real time alerts  
*Stack: pandas, Flask, AWS EC2, PostgreSQL*

### Adobe

San Jose, CA

Data Scientist Intern; Data Science New Products (DSNP)

Jun - Sep 2019

- Compared several clustering techniques (NMF, LDA, Agglomerative, K-Means) to segment Photoshop users by intent and detect difficult to use features.
- Identified 2 features and 2 tutorial pages with poor success rates and communicated with the product team as pain points
- Built NLP preprocessing pipeline on tutorial urls for use as model predictors  
*Stack: pyspark.sql, genism; pyspark.ml, scikit-learn; plotly*

### Bank of America Merrill Lynch

New York, NY; London, UK

Vice President; ETF Trader, Global Equities

Jun 2008 - Mar 2017

- New products lead; built pricing, trading and risk management tools and techniques across various financial instruments. Responsible for books totaling \$10m+ of revenue
- Utilized pricing and market data to calculate bond and equity fair value using correlated proxies
- Consistently developed connectivity and communication across time zones and asset classes. Negotiated multiple stakeholders to become the first person in the company to trade bonds on the equities floor; co-managed first ever 24hr ETF trading book

## PROJECTS

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- *Topological Data Analysis in Population Genetics (Bustamante lab, Stanford Biomedical Data Science)*: used analysis of topological invariants to discover structures not picked up by PCA
- *Exploring Box Convolutional Layers*: Incorporated custom box convolutional layers in SSD object detection network to reduce model parameters by half while maintaining loss metrics (*pytorch*)
- *Detection of Brain aneurysms using CNNs (Stanford Medical School)*: trained encoder decoder segmentation network to predict aneurism location on CTA scan (*pytorch*)

## SKILLS AND TECHNOLOGIES

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- *Programming*: Python, R, SQL, C++; pytorch, pyspark
- *Languages*: Spanish (conversational)

## PERSONAL INTERESTS

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- World traveler: visited 50+ countries; started off learning R in a co-working space in Bali
- Sport: winner of charity white collar boxing match, present enrollee in *75 Hard* Challenge