Neil Vyas

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EDUCATION

The University of Texas at Austin Fall 2014 - *Expected* Spring 2018
Bachelor of Science, Mathematics | GPA: **3.80** | *Undergraduate GPA: 3.92*

EE 381V	Grad. Machine Learning *(auditing)*	M 372K	PDEs	M 365C	Real Analysis
CS 388R	Grad. Randomized Algorithms	EE 381K	Grad. Convex Optimization	M 373K	Abstract Algebra
EE 381J	Grad. Prob. and Stochastic Processes	M 362M	Stochastic Processes	M 427LH	Vector Calculus Honors
M 341H	Linear Algebra Honors	M 361	Complex Analysis	M 427KH	Differential Equations Honors

SKILLS

Operating Systems: OSX and GNU/Linux (Ubuntu and Arch)
Languages & Software:
Experienced: Python, Git, LaTeX **Intermediate:** Scala, R, SQL, Spark **Exposure:** Haskell, Javascript

WORK EXPERIENCE

Yelp, San Francisco, CA May 2016 - August 2016
Search Recommendations Intern

Civitas Learning, Austin, TX January 2015 - Present
Data Scientist Intern
Using predictive analytics to increase academic performance at over 70 partner institutions.

- Created time-dependent clustering to understand student enrollment pathways
- Performed ad-hoc analysis and defined data sources using Postgres and Redshift
- Designed lightweight RESTful data visualizations using Flask (python) and D3.js
- Performed QA for logistic regression workflows (data availability and regularization)
- Proved properties of a novel method for Propensity Score Matching/Weighting, for use in causal analysis of the effects of university outreach programs

PROJECTS

Lending Club Loan Default Prediction
Developed a model for identifying mis-priced loans on the peer-to-peer lending network LendingClub.

- Conducted exploratory data anlysis on a large data set to find predictive features
- Extracted features from unstructured text fields using word2vec, PCA, clustering
- Trained random forest classifiers by loan grade, selecting for high recall

Hedge Fund Alpha Analytics
Analytics Dashboard for exploring the space of Hedge Funds by type and performance.

- Created an analytics dashboard using R (with Shiny) and Javascript
- Clustering successfully recovered different "heuristic" classes of HFs, providing quantitative evidence for this classification scheme

ORGANIZATIONS

Texas Undergraduate Computational Finance, Director Fall 2014 - Present
Developed algorithmic trading strategies, pitched and analyzed short-term options plays.

- Implementing quantitative trading strategies using Quantopian (backtesting)
- Emphasis on options plays, with equity portfolio managed by quant analysis
- Applying machine learning techniques to financial markets
- Built ELO-based webapp for ranking candidates during recruiting