NEIL VYAS

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EDUCATION

The University of Texas at Austin   Fall 2014 - Expected Spring 2018
Bachelor of Science, Mathematics

M427L - H Advanced Vector Calculus Honors   **M362K** Probability   **M325K** Discrete Mathematics

COMPUTER SKILLS

Languages & Software
Proficient: Python, Git, LaTeX   **Exposure:** R, Haskell, Javascript
Operating Systems
UNIX-based (OSX) and UNIX-like (GNU/Linux) systems

PROJECTS

Determining the effect of transpiration on local heat index   Fall 2014
Tools: Arduino, R, RStudio
- Collected time series data of temperature and humidity over multiple days using Arduino hardware
- Conducted statistical tests to determine that the two outdoor locations were statistically different
- Analyzed time series data using autocorrelation and regression techniques to determine patterns

Determining the least squeaky method of chalkboard writing   Fall 2014
Tools: Bash, Python (using Scipy, Numpy, and Matplotlib)
- Collected audio data of over 400 chalk strokes across 18 treatment groups representing 6 factors
- Performed Discrete Fast Fourier Transforms in order to determine constituent frequencies
- Analyzed the data using statistical and graphical analysis techniques in order to draw conclusions

LEADERSHIP & ACTIVITIES

Texas Undergraduate Computational Finance Corp., Developer   Fall 2014
Developed algorithmic trading strategies and explored topics in finance through independent research
Ongoing Projects:
- Designing and writing effective options trading curriculum using LaTeX and R (Committee Head)
- Creating an R graphics package for use in all publications in order to enforce style consistency
- Developing and analyzing time-series prediction algorithms in R and Python for trading applications
- Maintaining and extending a large Python codebase with heavy use of Scipy and Numpy

UT Quiz Bowl (NAQT) Team   Fall 2014
- Third highest individual score out of all participants at Rice Novice tournament in October
- Captain of Novice division team; responsible for questions in math, music, and literature

Student Mathematics Discussion Group   Fall 2014
Ongoing involvement:
- Giving and attending talks on advanced subjects outside of the typical undergraduate scope

Latin Club, President   2010 - 2013
- Presided over competition preparation for, and assignment of members to, academic events
- Led Jasper Latin Club to most succesful showing at State (2nd place Lower Sweepstakes)
- Became the 9th place lower-div school individually after school ended club sponsorship

AWARDS & HONORS

Microsoft College Coding Competition, 4th place   Fall 2014
Chicago National Academic Quiz Bowl, 2nd place   Summer 2014
National Merit Scholar   Spring 2014
State Latin Exam, Summa Cum Laude   2011, 2012, 2013
National AP Scholar   Summer 2014

HOBBIES & INTERESTS

Novels, Classical Music, Violin, Traveling, Tea