

# KUNAL RAJANI

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## EDUCATION

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**Cornell University**, NY, GPA – 3.8/4 Dec 2012 (Expected)

Master of Engineering in Financial Engineering (**Girish Reddy Ezra Fellow**)

- Courses: Optimization, Simulation, Statistics, Computational Finance, Risk, Portfolio Management, Bond Math
- Degree Project – Devise an optimal algorithm for intraday tracking of a benchmark portfolio to minimize risk during market making operations (In progress, sponsored by Cantor Fitzgerald)
- Other Projects:
  - Optimized and back tested equity investing strategies (130/30, technical analysis) using Matlab
  - Utilized Multi Factor Models and Sharpe ratio to maximize risk adjusted returns of S&P 500 stocks
  - Explored the use of ARMA models and behavioral analysis to predict stock returns (paper at my blog)

**IIT Bombay**, Mumbai, India Aug 2003 - Jun 2007

B.Tech in Engineering Physics, GPA – 7.85/10 (First Class)

- **Research Intern, University of Toronto**, NSERC Fellow May 2006 – July 2006
  - Improved the efficiency of solving a wave equation by 5 times by programming GPUs instead of CPUs

## EXPERIENCE

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**Numerix**, New York – **Financial Model Validation Intern** Jun – Aug 2012

- Developed templates to price FX and IR products by compiling market data, conventions and models into structured deals based on client requirements
- Tested the templates for quality assurance under diverse modeling scenarios to ensure consistent performance

**Cornell University**, Ithaca – **Teaching Assistant** Jan-May 2012

- Performed cleaning and statistical analysis on data using SAS for “Data Driven Analysis” course

**Capital One**, Bangalore, India Jan 2009 – Jun 2011

**Associate**, Analytics Division, Credit Card Fraud and Customer Operations

- Optimized models and developed algorithms to detect fraudulent activity that saved ~\$2MM in 2010
- Conducted control tests, studied industry trends and analyzed historical statistics to compute value of fraud declines and create a risk profile for different customer segments
- Analyzed complex relationships between numerous variables to identify risky and profitable segments
- Mentored two analysts to understand and structure problems and communicate the insights to stakeholders

**Global Analytics India Pvt. Ltd**, Chennai, India Jun 2007 – Dec 2008

**Analyst**

- Managed and checked for quality the underwriting operations of a major US subprime payday lender
- Improved models to better assess the creditworthiness of customers by deploying regression and clustering in SAS leading to a drop in the first payment defaults from 10% to 6%
- Took initiative to learn Perl and Shell scripting to automate repetitive processes that improved reporting tools

## TECHNICAL SKILLS

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- SAS, CART, SQL, Teradata, Excel, R, MATLAB, VBA, C++, Shell Scripting, Perl, Linux

## AWARDS AND INTERESTS

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- Awarded IIT's highest honor for contributing towards winning the choreography championships, 2007
- Applied mathematics to innovate the fan blade design securing 3<sup>rd</sup> position in 2004 for the original idea
- Among the top 0.01% in India for securing 100% in Mathematics in 2003
- 11<sup>th</sup> and 22<sup>nd</sup> in the Regional Mathematics Olympiad (2002 and 2001 respectively)
- I enjoy playing badminton and ping pong and maintaining a blog at [thebigredlife.blogspot.com/#analysis](http://thebigredlife.blogspot.com/#analysis)