Nitish Kumar Kulkarni

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EDUCATION

- **Carnegie Mellon University, School of Computer Science** — *Pittsburgh, PA*
  Master of Computational Data Science (Analytics) — *Aug 2017 - Dec 2018*
- **Indian Institute of Technology Madras** — *Chennai, India*
  B.Tech. & M.Tech., Electrical Engineering; Minor: *Economics* — *Aug 2009 - Jul 2014*
  CGPA: 9.13/10 (Minor: **9.4/10**), Rank: **2/24**
  Awarded *Schneider Electric India Foundation Scholarship*, *Merit Cum Means Scholarship* & *C.B.S.E. Merit Scholarship*

PROFESSIONAL EXPERIENCE

- **Data Science Intern, DataSigns Technologies, Bengaluru** (*Data Analytics and Credit Modeling*) *May - Jul 2017*
  - Devised a credit underwriting model based on logistic classifiers to predict the likelihood of loan defaults
  - Engineered classification features from unstructured data including texts, financial transactions, location and social media
- **Associate, Goldman Sachs, Bengaluru** (*Fixed Income Strats, Investment Management Division*) *Jan - May 2017*
  - Built trading strategies using anomaly detection techniques, dimensionality reduction and linear regression models
  - Analyzed cross-correlations among financial time series using Bayesian parameter estimations for vector autoregressive models
  - Designed & built research tools for computing risk metrics, analyzing statistical properties and backtesting trading strategies
- **Quantitative Analyst, Goldman Sachs, Bengaluru** (*Fixed Income Strats, Investment Management*) *Jun 2014 - Dec 2016*
  - Modeled the impact of economic data releases and business cycles over financial assets using linear regression and SVMs
  - Developed infrastructure to aggregate terabytes of data and reflect real-time trades consistently across multiple geographies
  - Managed an intern, conducted on-site technical interviews and was involved in on-campus recruiting
- **Software Engineering Intern, Qualcomm Inc., Bengaluru** *May - Jul 2013*
  - Extracted the top critical paths for a digital circuit using graph traversal algorithms and Monte Carlo simulations
  - Processed large amounts of text data using perl to model digital circuits as Directed Acyclic Graphs
- **Electrical Engineering Intern, Texas Instruments, Bengaluru** *May - Jul 2012*
  - Interfaced CAD tools using shell and tcl scripts to streamline the estimation of *Fault In Time* for semiconductor devices
  - Developed a probabilistic technique for estimation of *Soft Error Rate* to achieve 94% accuracy against simulations
- **Product Development Intern, Harness Handitouch Pvt. Ltd., Chennai** *May - Jul 2011*
  - Designed and developed an FTIR-based multitouch surface; won the *Best Inten Award*
  - Built an alpha-prototype using video processing of an IR camera feed, reduced the cost of the product by 80%

PROJECTS

- **Statistical and time series analytics of investment portfolios** *May - Jul 2017*
  - Developed a python toolkit for computing aggregate statistics and risk metrics for investment portfolios
  - Architectured the database design and server implementation to efficiently store and manipulate time series data
- **Modeling of glitching effects in estimation of dynamic power consumption** *Jul 2013 - Jun 2014*
  Master's Dissertation, Department of Electrical Engineering (Guide: Dr. Nitin Chandrachoodan)
  - Implemented *probability propagation algorithm* to estimate average number of transitions at every node in a circuit
  - Incorporated Monte Carlo analysis, graph-based algorithms and density estimation techniques to identify high glitch nets

COURSE WORK & SKILLS

CMU - Machine Learning (PhD)*, Deep Learning*, Search Engines*, Machine Learning with Large Datasets*
IIT Madras - Data Structures & Algorithms, Machine Learning, Probability and Stochastic Processes
- Image Signal Processing, Graph Theory, Analog & Digital Signal Processing

Programming - Python, C, C++, Java, Matlab, R, Octave, Shell, Perl
Tools/Frameworks - Scikit-learn, Pandas, Hadoop, MapReduce, MongoDB, SQL

AWARDS, TEACHING & LEADERSHIP

- **Vice President Public Relations**, *Koramangala Toastmasters Club*, Toastmasters International, Jan-June 2017 *2017*
- **Teaching Assistant**, *Data Structures and Algorithms* & *Digital IC Design*, IIT Madras *2014*
- **Tutor**, short-term course on *Programming In Python* by *Reflections - Dhruva Club*, IIT Madras *2014*
- **Tutor**, Computer Organization and Architecture, *Quality Enhancement in Engineering Education* *2014*
- **Convenor**, *Electronics Club*, IIT Madras *2013*
- **Campus Winner** (among top 3 in India), *Goldman Sachs Quantify*; represented IIT Madras for finals at GS Bangalore *2013*
- **2nd prize**, General Electric Research Expo; Amongst **top 9** (out of 120), *Schneider Electric Innovation Challenge* *2012*

*Currently undertaking