

# Raghuveer Achukola

Email: raghu.achukola@gmail.com

LinkedIn: raghuveer-achukola

Phone: (214) 675-2696

Location: Austin, TX

## Certifications

**Microsoft:** Professional Program Certificate in Data Science (2018)

**UT Austin:** Big Data Analytics (2017)

**UT Austin:** Applied Statistical Modeling (2017)

**ATC:** Android Developer (2015)

## Skills

### Programming/ Data Processing

Python, R, MATLAB, SAS, C++, Java, Android, Javascript, SQL, NoSQL, MongoDB, Apache Cassandra

### Reporting Tools/BI Tools

Microsoft Excel, PowerBI, Tableau

### Machine Learning

k/x-means clustering, GMMs, NLP, SVM, linear/logistic regression, neural network, random forest, Naïve-Bayes, Markov Chains, Bayesian inference

### Data Science Packages/Frameworks

pandas, scikit-learn, NumPy, seaborn, ggplot2, xgboost, matplotlib, Apache Spark/Hadoop, Jupyter Notebook, AWS, Azure

### Collaboration Tools

Git, Slack, Jupyter Notebook, DropBox

### Spoken Languages

Professional proficiency in English, Spanish, Hindi.

Conversational in Telugu, French

## Summary

Technically sophisticated Microsoft-certified data scientist with solid history of data analytics and applied statistics in the energy and finance industries. Proven record of research, extensive understanding of statistical methods, and communicating analyses in clear terms to clients and management.

## Work Experience

### Quantitative Data Analyst

Nov 2017-Aug 2018

#### **IntegraFEC LLC**

*Legal consulting firm, analyzed evidence of fraud for clients across multiple industries*

- Streamlined ETL pipeline for collecting live trade data from online exchange website, resulting in a **three-fold increase in data processing speed** and slashed data loss to **1/8th of original rates**
- Develop a webscraper in Python to obtain and analyze CBOE data from cryptocurrency website for signs of cryptocurrency options market manipulation

### Multiple Roles

May 2016-Jan 2018

#### **University of Texas at Austin**

*Various projects ranging from automating the process of identifying references to scientific software in research papers to designing classifiers for buildings based on their daily energy usage profile.*

### Data Analyst

- Implemented strategies that **reduced errors in raw data by 61%** by applying SVM and Linear Convolution anomaly detection methods.
- Deconstructed and cleaned **TBs of energy usage data** from various formats into HDFS format using PostgreSQL, Python, Sqoop, and R.
- Successfully designed and executed a streamlined process for buildings by writing **x-means clustering algorithms in Python** on daily energy usage data.
- Summarized data for biweekly presentations to collaborators using **visualizations made in PowerBI**

### Research Analyst

- Maximized accuracy, and halved the variance of accurately identifying references in text to scientific software using **Latent Dirichlet Allocation (LDA)**
- Achieved highest completion rate of all analysts in preparing raw data for analysis.
- Trained new employees in the textual analysis framework of the organization

## Projects

### Predicting Chronic Hunger 2018

Final Project from Microsoft Professional Program in Data Science, used Principal Component Analysis (PCA) and non-linear regression to predict the prevalence of undernourishment in various regions

### Option Valuation Modeling 2017

Measuring deviation of actual pricing from various option pricing models in Python.

### Chemical Orbital Modeling 2016

Final Project from graduate computational chemistry class, using MCMC models (Metropolis algorithm) in Python to represent 3D Models and explore fundamental tenets of Molecular Orbital theory.

### Scorekeeper App 2015

Android App created while working for The Eighth Man, intended to facilitate live score reporting and calculating statistics using AWS and NoSQL.

## Additional Information

### Interests:

I love learning new sports and I play and compose songs on the piano

**Work Eligibility:** U.S. Citizen

## Organizations and Volunteering

### The Eighth Man

Aug 2014 – Present

*Sports Analysis Website*

- Pioneered an Android application capable of calculating in-game statistics using **AWS and NoSQL** to relay data live to servers from apps.
- Implemented a **weighted logistic regression model** that **outperformed official national rankings** in predicting outcome of close games
- Authored dozens of articles using analytics to **tell a story to non-technical readers**
- Responsible for **researching data to find key insights** into current teams to improve social media presence, created weekly series in response.

### University Computational Finance

Aug 2016 - Aug 2018

*Computational finance organization in Austin with weekly pitches from members*

- Analyzed hundreds of stocks using both fundamental analysis of companies' financial statements as well as quantitative analysis using ML models
- Utilized **Naïve-Bayes classifiers** to test alternatives to the efficient market hypothesis; **built alternative option valuation models** based on results
- Researched market manipulation in simulated bot-traded markets utilizing **Markov chains and models from chaos theory**

### Mentorship Program – ACC

Aug 2016 - Aug 2018

*Volunteer at a Mentorship Program partnering first-year community college students with university upperclassmen for tutoring and mentoring*

- Created lessons plans in fields of physics, chemistry, and statistics
- Led bimonthly training programs in the fields of **calculus, statistics, and Python**

## Education

### The University of Texas at Austin

May 2017

B.S. Mathematics, Biophysics

Specialization in Statistics and Data Science

Certificate in Applied Statistical Modeling

### Relevant Coursework

- Advanced Multivariate Models
- Generalized Linear Models
- Numerical Analysis of Data
- Bayesian Nonparametric Modeling
- Computational Physics
- Database Management