# Akhil Jalan

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## SUMMARY

Aspiring data scientist with a passion for communicating and sharing ideas. Experienced in applied machine learning and statistical programming through several projects using real-world data. Adept in all aspects of the data science process, including data collection, cleaning, visualization, analysis, and communication.

## EDUCATION

**University of California, Berkeley (Class of 2019)**                                              **GPA: 3.98**

*B.A. Applied Mathematics (Concentration: Data Science), B.A. Computer Science*
*Regents' and Chancellor's Scholar, Class of 2019 (Awarded to top 2% of undergraduates)*
*Selected Coursework:* Machine Learning (A), Probability (A+), Linear Algebra (A+), Algorithms (A)

## WORK EXPERIENCE

**Software Engineering Intern**                                                           Sunnyvale, CA
*Hashcut*                                                                          May 2017-August 2017
  - Saved 100+ hours of time by proposing and implementing video contest automation, using Javascript jQuery and HTML Bootstrap
  - Generalized video ingestion from multiple sources (YouTube, Vimeo, Twitch) using a custom-defined scheme in MongoDB database
  - Utilized YouTube API to ingest user data automatically

## PROJECTS

**Machine Learning for Counterterrorism (Team of 3)**
  - Predicted success rates of terrorist attacks with 93% accuracy using random forest model
  - Improved random forest, neural network prediction accuracies 1%, 5% via cross-validation
  - Extracted salient features for successful attacks in random forest and regression models

**Natural Language Processing for State of the Union Speeches (Team of 3)**
  - Predicted correct President to deliver an official address with 76% accuracy using K nearest-neighbors model
  - Improved K nearest-neighbors accuracy 9% by cross-validating number of neighbors (K)
  - Mapped similarity of Presidents via dimensionality reduction (MDS)
  - Tokenized and stemmed corpus of over 200 speeches to create speech-vector representation

**Political Partisanship: A Look at the Data (Individual)**
  - Found statistically significant (p-value < 0.001) growth in ideological separation between parties in U.S House and Senate, using Spearman non-parametric correlation coefficient
  - Published in Towards Data Science with over 250 reads

## TECHNICAL SKILLS

**Languages**: Python, R, SQL, Java, MATLAB, Bash, Javascript, HTML5, LaTeX
**Python Libraries:** Scikit-learn, Keras, Tensorflow, Pandas, Numpy, Scipy, Matplotlib, Plotly, Seaborn, Scrapy, Natural Language Toolkit (NLTK)
**Tools:** Tableau, Jupyter Notebooks, Spark, Hadoop
**Interests**: Cooking, Podcasts, Chess, Hiking, Coffee