

# CHAITHANYA SAI KARNE

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## Education

### University of Pennsylvania

Aug 2021 – May 2023

*Master of Science in Engineering in Data Science*

*CGPA: 3.75/4.0*

- **Relevant Coursework:** Applied Machine Learning, Statistics for Data Science, Deep Learning for Data Science, Programming (Python and Java), Big Data Analytics, Databases (Database Design), Computational Linguistics

### Manipal Institute of Technology, Manipal, India

Jul 2016 – Jul 2020

*Bachelor of Technology in Mechatronics Engineering; Minor Specialization in Data Science*

*CGPA: 4.0/4.0*

## Technical Skills

**Languages:** Python, Java, R, MATLAB, JavaScript

**Database Technologies:** SQL, MySQL, Oracle, MongoDB, Neo4j, DataGrip, Redshift, AWS RDS, Hadoop - HDFS, Apache MapReduce, Hive, Google BigQuery

**Cloud Technologies/Frameworks:** PyTorch, Keras, Scikit-Learn, Apache Spark, Data Mining, Data Wrangling, NodeJS, ReactJS, Git, Matplotlib, Seaborn, Pandas, LaTeX, Tableau, ETL, AWS - S3, Athena, SageMaker, Advanced Excel

## Experience

### Graduate Data Management Assistant

Jan 2023 – Present

*The Wharton School, University of Pennsylvania*

*Philadelphia*

- Managed, explored and formulated research questions/summaries for 8 of 'The Wharton iWRDS' official datasets

### Graduate Teaching Assistant

Sep 2022 – Present

*University of Pennsylvania, for the 'Programming Languages and Techniques (CIT590)' course*

*Philadelphia*

- Worked with a team of 9 assistants, to guide 100+ students by designing 5+ Python & JAVA learning sessions, and grading exams

### Graduate Technical Assistant

Sep 2022 – Dec 2022

*Wharton Customer Analytics - Analytics Accelerator program, The Wharton School*

*Philadelphia*

- Associated with Lowe's Companies, Inc., to identify 10+ best offline (BOPIUS) products which were found to cost below \$40, for Lowes' backroom space, using Python based clustering and regression
- Collaborated with Align Technology to optimize the best marketing strategies for the product 'Itero' & maximize sales

### Graduate Research Assistant

May 2022 – Aug 2022

*ESG & Political Risk Research Lab, The Wharton School, University of Pennsylvania*

*Philadelphia*

- Developed 20+ complex Python scripts & 30+ AWS Athena SQL queries for projects aimed at examining the influence of businesses on the social landscape by analyzing online news articles (GDELT data lake) of 260+ countries
- Analyzed over 100 million rows/articles using AWS S3, Athena & SageMaker, devised 2 funded data pipelines by connecting location names in the articles' text to PRIO GRID geo cells, ran BERT model to visualize articles' sentiments

### Business Analyst Intern

Jan 2020 – Jul 2020

*MiQ Digital India (P) Ltd*

*Bangalore, India*

- Assessed the impact of 10+ global advertising campaigns & formulated recommendations for digital spend optimization
- Set up 5+ automated analytical workflows by streamlined Data Engineering, Predictive Modeling for efficient ad spend
- Implemented customer clustering, classification & web scraping for 2 top tier clients utilizing R, Python, SQL, Hive & Excel

## Academic Projects

### Weather Planner Application | AWS, DataGrip, NodeJS, ReactJS

Sep 2022 – Dec 2022

- Designed a fully functional web application that compares 2 cities' weather & recommends future travel based on weather
- Created a own AWS RDS database backed with complex SQL queries using DataGrip for the application

### Visual Question Answering | Python, sklearn, PyTorch

Sep 2022 – Dec 2022

- Built a Bottom Up Top Down visual question answering model with modified FasterRCNN weights for bottom up layer and attention based LSTM model for top down approach resulting in a VQA score of 0.77

### Zomato Hotels Complete Data Analytics | Python, sklearn, Matplotlib, Seaborn, Folium

Oct 2022 – Nov 2022

- Analyzed Zomato Indian restaurants & predicted good restaurants with 79%-84% accuracy using Random Forest, KNN

### Fake News Predictor | Python, pandas, sklearn, NLP, NLTK, Vectorization

Oct 2022 – Nov 2022

- Developed a Python script with Bag of Words to predict fake news using Multinomial Naive Bayes with 90% accuracy

### Supply Chain Analysis and Late Delivery Predictor | Python, pandas, Google Cloud Console

Mar 2022 – May 2022

- Achieved accuracy of 85% using Random Forest, while predicting late delivery risk of orders of the firm DataCo Global

### Masked Face Recognition | Python (CNN, OpenCV, Keras)

Oct 2021 – Dec 2021

- Coded a Python program to detect people's faces & names with masks properly & improperly worn with 65% accuracy

## Publications

- "KCSNBShiny" and "KCSKNNShiny" R Packages: Developed using RStudio (R Shiny), applicable for predictive analysis, employing Naive Bayes k-nearest neighbors algorithms to predict any variable in categorical and numeric data, published and deployed onto CRAN (Comprehensive R Archive Network) in July 2019)