

CHAITHRA K.C

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EDUCATION

SYRACUSE UNIVERSITY, SCHOOL OF INFORMATION STUDIES

Syracuse, New York

Master of Science Applied Data Science

May 2023

Coursework: Introduction to Data Science, Applied Machine Learning, Big Data Analytics, Applied Deep Learning, Natural Language Processing, Inferential Statistics, Data Analysis & Decision-Making, Scripting for Data Analysis, Advanced Bigdata Management.

GPA: 4.0/4.0

JAIN UNIVERSITY

Bangalore, India

Bachelor of Engineering Computer Science

Jun 2015

Relevant coursework: Principles of Programming Languages, Java & J2EE, Data Structures, Algorithms, Database Management Systems, Data Mining, Business Intelligence, Design Patterns, Unix System Programming, and Linux Internals

CGPA: 9.56/10.0

TECHNICAL SKILLS

**Key Skills:** Machine Learning, Natural Language Processing, Deep Learning, Exploratory Data Analysis (EDA), Data Visualization, Hypothesis Testing, Probability and Statistics, RESTful APIs, Data Pipelines, Database Management

**Programming Languages:** Python, R, Java, SQL, PL/SQL, NoSQL

**Python Libraries:** PySpark, Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, NLTK, Spacy, Keras, TensorFlow, Gensim, Beautiful Soup, PDFMiner

**Databases:** MySQL, Oracle DB, Mongo DB

**Tools & Utilities:** Databricks, Apache Spark, Tableau, Advanced MS Excel, Perforce, Git, Maven

**IDEs:** Google Colab, Jupyter Notebook, PyCharm, R-Studio, IntelliJ

ACADEMIC PROJECTS

Credit Card Default Prediction

Sep 2022 – Dec 2022

- This project used three machine learning models (Logistic Regression, Random Forest, and Deep Learning) to analyze credit card default risk without relying on credit scores or credit history
- Dataset consisted of 30,000 credit card users and 26 features
- Random Forest model performed the best, with a precision of 0.80 and a recall of 0.65
- Most important default predictors were the most recent two months' payment status and credit limit
- These models could be helpful for credit card firms, loan lenders, and banks to make educated decisions on creditworthiness

Sentiment Analysis of COVID News Articles

Mar 2022 – May 2022

- The dataset includes news articles related to COVID-19 from UK, India, Japan, and South Korea newspapers. On the dataset of 10K news articles that were collected from IEEE data port
- Data cleaning, pre-processing, and exploratory analysis were performed on the dataset
- Textual data was transformed into numeric vectors using word vectorization techniques, such as the Bag of Words (BOW) model, BERT word embedding, and XLNet embedding
- Using Naïve Bayes classifier and BiLSTM neural network, predicted sentiment polarity - Negative, Positive, and Neutral of each news article in the dataset
- BiLSTM model achieved an accuracy of 64%, whereas Naive Bayes algorithm had an accuracy of 78%

WORK EXPERIENCE

Data Science Intern, RSG Media, New York

May 2022 - Aug 2022

- Developed a workflow using Databricks and Apache Spark to automatically feed historical data as input to XGBoost ML Model by converting existing SQL Queries to PySpark, which was utilized in predicting future audience
- Implemented python module for entity resolution between Viacom’s program inventory & Gracenote data, and IMDb & TMDb using NLP pre-processing techniques, TF-IDF word vectorization, and K-Nearest Neighbor ML model
- Built a data pipeline for ingesting 700 million metadata records from IMDb website to AWS S3 bucket using Python AWS SDK Boto3, after which the data underwent various data transformations and validations before being loaded into Databricks Delta Tables
- Aggregated data from several delta tables using SQL and PySpark to generate forecast report that allowed for the comparison of predictions made by various models using MAPE and RMSE error metrics
- Converted SQL-based ETL pipelines source code to PySpark to enable automation

Senior Software Engineer, Envestnet Yodlee, Bangalore, India

Mar 2018 - Sep 2020

- Developed multi-threaded data quality tool in Java to validate holding and transaction data veracity and extrapolate missing financial details based on patterns observed with other users
- Implemented POC for determining suitable database for the project among OLTP (Oracle DB), Mongo DB, and Apache Kudu based on query performance
- Designed Mongo DB Collections, documents with suitable indexing, and configured Spring repositories for application querying
- Implemented Netflix-Ribbon load balancer to achieve fault tolerance and distribution of application traffic
- Created REST API using JAX-RS for sharing reconciliation results with other teams

Software Engineer, Envestnet Yodlee, Bangalore, India

Jul 2015 - Feb 2018

- Built web crawlers using Java Selenium APIs to aggregate users' financial data and personal information from banking websites
- Created PDF parser for retrieving data from bank statements using Python PDFMiner text extraction tool
- Implemented regex validator using Java regular expressions for validating PII
- Reviewed the code submitted by peers and mentored new hires