Hamsini Sankaran

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Summary

Aspiring Data/ML Scientist and Analyst with expertise in data engineering, machine learning, and data visualization.

Education

2023 **University of California, Berkeley**,
Master of Information and Data Science (Graduating in Fall 2023),
Relevant Courses: Machine Learning, Data Engineering, Statistics for Data Science, Data Visualization.
GPA – 4/4

2016–2018 **San Jose State University**,
Master of Science, Computer Engineering.
GPA – 3.42/4

2010–2014 **Anna University**,
Bachelor of Engineering, Electrical and Electronics .
GPA – 3.90/4

Skills

Languages	Python, R, Scala
Web Dev & Frameworks	TensorFlow, Keras, Django, Flask, React JS, HTML, CSS
Data Analysis	Pandas, NumPy
Big Data	Kakfa, Akka stream, Elastic Search, Spark, Hadoop, MapReduce, ETL
Database	Postgres, Redis, Mongo, Neo4j, SQL
Visualization	Scikit-learn(python),ggplot(R),Grafana, Tableau, D3.js, Altair, Splunk, mcharts
Cloud	AWS
Statistics & Machine Learning	Hypothesis Testing, Linear Regression, Logistic Regression, Decision Trees, Random Forest, Xgboost, KNN, SVM, DNN, CNN, GRU RNN, LSTM, Transfer Learning

Data Science Projects (*Portfolio*)

July 2023 – August 2023 **Bird Song Classification Using Neural Networks and Machine Learning**, *UC Berkeley*.
- Spearheaded the use of BirdCLEF 2023 Kaggle data for bird species classification and biodiversity monitoring.
- Transformed audio into 8-second segments (4-second overlap) for robust data representation.
- Employed audio augmentation techniques like Gaussian noise and time stretch for model generalization.
- Extracted MFCC, chroma, and mel spectrogram features for distinct bird vocalizations capture.
- Explored diverse machine learning models like logistic regression, random Forest, neural Networks, CNN, LSTM, GRU RNN and more.
- Achieved 95% training and 87% testing accuracy using GRU RNN with evaluation based on F1-score metrics.
- Developed a valuable AI tool for accurate avian species identification.
- **Technologies used: Python, Tensorflow, audio analysis, random forest, transfer learning**

July 2023 – August 2023 **Revolutionizing Acmet Gourmet Meal (AGM) Delivery with NoSQL Data Magic**, *UC Berkeley*.
- Led a transformative project at AGM, integrating NoSQL databases for innovative meal delivery solutions.
- Architected Neo4j, MongoDB, and Redis databases to support revolutionary meal delivery strategies.
- Utilized advanced graph algorithms (page rank, community detection, closeness centrality) for optimizing BART delivery networks.
- Implemented customer recommendation systems with personalized route suggestions.
- Enriched AGM's data science skill set by introducing data visualization and graph analytics methodologies.
- **Technologies used: Python, Neo4j, MongoDB, Redis, Data Visualization, Graph Analytics**

April 2023 – April 2023

Big Budgets? Big Returns? - An Analysis of Film Industry, *UC Berkeley*.

- Analyzed the movie database (TMDB) data for budget-revenue correlation in movies.
- Led a team of four and conducted exploratory studies and developed regression models on a 30% subsample
- Demonstrated proficiency in validating assumptions of large samples and classic linear models.
- Developed three regression models to analyze movie revenue factors with different covariates like movie run time,vote count and popularity.
- Identified the best model based on adjusted R^2 and practical significance, showing potential for a 77.2% increase of movie revenue.
- **Technologies used: R, Python, Linear Regression**

Experience

January 2019–January 2023

Software Engineer, Walmart eCommerce, Sunnyvale, California.

- Engineered data-driven solutions with big data and streaming tech to elevate the Walmart store ecosystem.
- Developed and executed complex SQL queries to uncover core infrastructure insights and correlate data.
- Engaged in proactive interactions with customers to predict anomalies in store networking equipment.
- Designed micro-service-based solutions for store infrastructure incident resolution.
- Leveraged AIOps capabilities for detecting, diagnosing, and improving MTTR.
- Created a highly scalable responsive portal delivering actionable insights to 20K users.
- **Technologies: React, Scala, Elastic Search, Python, Apache Kafka, PostgreSQL, Splunk,Spark**

October 2018–December 2018

Devops Fellow Engineer, Aeris Communications, San Jose, California.

- Designed and implemented tools for automating the deployment of IOT applications.
- Created automation to handle disk and memory log errors from Nagios and ELK stack.
- Analyzed server log messages and developed dashboard on Kibana.
- **Technologies: AWS, Docker, Python, Elastic Search, Linux, bash**

May 2018–August 2018

Software Engineering Intern, Konviv Inc, Berkeley, California.

- Employed Machine Learning algorithms to develop an AI based financial management chatbot.
- Led the data science team in creating smart categories of the customer transactions using unsupervised learning.
- Worked on Bayesian network based recommendation engine to guide the customers for better financial decisions.
- **Technologies: Machine Learning, Python, K-Means clustering, KNN, NLP, PCA, Mixpanel analytics.**

May 2017–August 2018

Deep Learning Research Assistant, San Jose State University.

- Worked with the research team in developing a UAV graffiti removal system in the city of San Jose.
- Researched graffiti styles and performed graffiti detection using SSD mobilenet with 90 percent accuracy.
- Employed inception model to differentiate graffiti and non-graffiti images for drone classification.
- **Technologies used: CNN, SSD mobilenet model, TensorFlow, Python.**

July 2014–June 2016

Software Engineer, Larsen & Infotech, India.

- Developed online screens using COBOL modules and SQL queries that assist in generating travel insurance.
- Increased the number of the customers by 80000 by designing robust validation modules.
- Rectified the production defects and played a major role in improving the latency of the screen designs.
- **Technologies used: SQL, C++, JavaScript, HTML, COBOL, DB2.**

Awards

Employee Of The Month Award (June 2022)

Awarded the best employee of the month for submitting paper on "Proactive Incident Management leveraging AIOPS techniques" in the internal Walmart conference