

ABIRAMI RAJALINGAM

abiramirajalingam96@gmail.com | 315-952-4734 | [linkedin.com/in/abiramirajalingam](https://www.linkedin.com/in/abiramirajalingam) | github.com/AbiramiRajalingam

SUMMARY

- Data Scientist with 6 years of experience, specializing in statistical modeling to detect anomalies and harness data-driven insights, delivering cutting-edge predictive models and AI solutions across a diverse portfolio of 25+ active projects, spanning 10+ departmental collaboration, serving over 8,000+ customers
- Recognized with “*innovation*” award, reserved for the top 5% of employees, for outstanding contributions to the organization through innovative and strategic vision that boosted product sales and solved business problems for stakeholders

EDUCATION

Syracuse University, School of Information Studies, NY

Aug 2022 – May 2024

Master of Science, Applied Data Science

Coursework: Quantitative Data Analytics, Natural Language Processing, Data Warehousing, Big Data, Machine Learning

Anna University, Sona College of Technology, India

Jun 2014 – May 2018

Bachelor of Technology, Information Technology

Coursework: Data Structures, OOP using C++, Cryptography and Network Security, Probability and Statistics

PROFESSIONAL EXPERIENCE

Data Analyst Intern, Syracuse University, NY

Aug 2023 - Present

- Employ python sklearn’s regression models and ANOVA tests for pattern analysis of 2300+ student records, with one class SVM to detect anomalies in health care events, leading to 45% increase in participation of students
- Create exploratory data analysis via Tableau dashboards to report key performance indicators with interactive filters to enable exploration of student’s healthcare data, saving \$12000 of accessory budget through targeted spending
- Engineer SQL pivot tables and rank functions to enhance health service utilization status and medical resource allocation, achieving 20% increase in planning efficiency and 15% cut in resource wastage
- Applied advanced SQL stored procedures and user defined functions to assess 1500+ visitation data, thereby identifying illness with seasonal accuracy of 73% and calculating average wait time in appointment by 30%

Data Engineer, Iconsult Collaborative, Syracuse University, NY

Nov 2022 – Feb 2023

- Developed BERT algorithms with Named Entity Recognition to mitigate biased language in 1000+ job descriptions for candidates with disabilities using semantic searching, lowering potential bias by 68%
- Integrated hybrid neural network with reinforcement learning and custom MSE loss function, reducing false negatives by 25%
- Implemented reusable Azure ML pipeline and constructed TensorFlow estimator for fine-tuning BERT models, resulting in 35% boost in training efficiency
- Containerized the LLM using Docker and deployed on Azure Kubernetes Services for 70% better scaling and faster deployment

Machine Learning Engineer, Renault Nissan Alliance, India

Aug 2018 - Jul 2022

- Automated assigning query tickets using Auto ML classification model by to resolving 45% more tickets per day
- Applied ARIMA time series model to forecast monthly spare part release target and reduce allotment process time by 66.6%
- Designed handwritten invoice recognizer using OCR to further 91% credibility in layout detection combined with CNN model to minimize the need for manual image correction saving 150+ work hours per month
- Crafted intricate subqueries and join functions using PostgreSQL, leveraging primary keys to optimize database performance leading to 40% reduction in query execution time

PROJECTS

Text Analysis on Breast Cancer Using Reddit Post

Nov 2023 - Dec 2023

- Incorporated KeyBert to augment responsive Q&A chatbot by analyzing Reddit forums, enhancing advisory capabilities and patient communication, improving analytics and user engagement by 30% through personalized recommendations
- Employed LSTM for generating coherent responses to diverse queries, by integrating insights from BERT Topic Modeling and TfidfVectorizer-processed text data, achieving coherence score above 0.8 in chatbot interactions
- Implemented DistilBERT via transfer learning for sentiment analysis on cancer reviews, reducing manual review time by 30%

Enterprise Data Warehouse Development

Nov 2023 - Dec 2023

- Applied advanced ETL pipeline strategy incorporating Kimball Architecture principles, to develop scalable data warehouse for retail and streaming enterprise, achieving 40% increase in data processing efficiency
- Crafted Snowflake-centric data architecture, amalgamating data from S3 Buckets, Azure Blob Storage, and Minio into single warehouse, boosting data accessibility, which led to 30% uplift in analysis and reporting
- Employed DBT Cloud for intricate data modeling and pipeline construction by merging finance data from retail and streaming into data marts, thereby enhancing analytical precision by 25% and amplifying strategic insights
- Deployed Power BI, integrating and merging datasets from DBT into dashboards, reducing latency by 45% and improving decision-making for over 500 users

ThirdEye Custom Models

Apr 2019 – Sep 2019

- Devised SVM model that improved automobile brake drum durability by 85%, predicting data points for AUTOCAD controller
- Expedited employee hiring process by 80% through implementation of unsupervised clustering LDA model to match job goals
- Leveraged Azure Cloud resources to configure secure data storage for optimizing information retrieval time by 34% and deploying python functions as APIs using Flask

TECHNICAL SKILLS

Programming: Python (NumPy, Pandas, Scikit-learn, Seaborn, TensorFlow, Keras), spark, R, Pytorch

Frameworks & Tools: Tableau, Power BI, Git, JIRA, Snowflake, Big Query, Databricks, Airflow MLflow, DBT cloud, Jupyter Notebook

Database & Cloud: MySQL, Postgres, MS Access, MongoDB, Hadoop, Azure

Data Analytics: Normalization, T-tests, Chi-Squared tests, Bayes Factor, Hypothesis testing, Sampling, VIF, Linear Assumptions

ML / Deep Learning: Naive Bayes, Random Forests, Time Series, Regression, Bagging and Boosting, Cosine Similarity, Neural Networks, LSTM, GRU

NLP/ AI: BERT, LLM, GPT 3.5, OpenAI, Transformers, NLTK, Spacy, GloVe, Word2Vec

CERTIFICATIONS

Microsoft Power BI Data Analyst Associate

Present

Microsoft Azure Fundamentals

Sep 2023

Microsoft Excel Associate

Nov 2022

LEADERSHIP SKILLS

Event Supervisor

Aug 2023

- Coordinated an impactful virtual event on mental health, engaging 1400+ students in discussions for campus awareness and communicate positive change

Team Lead

Jan 2022

- Mentored a team of 15 software engineers in adopting agile methodologies and automation, to advance organizational productivity by 45% at “Renault Nissan”