Ramya Kosaraju

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EDUCATION

Business Analytics and Information Systems, Muma College of Business, USF, Tampa May 2025
Cumulative GPA: 3.85/4

Courses: Data Mining, Advanced Database Management, Analytical Methods for Business, Data Warehouse, Distributed Information Systems, Project Management, Advanced system Analysis and Design, Bigdata, Cloud Solution Architectures, Enterprise Information Systems

SKILLS

- **Programming:** Python (libraries: Pandas, NumPy, Sklearn, SciPy, TensorFlow, Keras), R (libraries: tidyverse), SQL, Java, C#, Shell Script, UNIX, PL/SQL
- **Data Analysis:** Data cleaning, transformation, visualization, exploratory data analysis, statistical modeling, trend analysis
- **Machine Learning:** Supervised and unsupervised learning algorithms, model evaluation and interpretation
- **Databases:** MySQL, Oracle SQL, MongoDB, PostgreSQL
- **Visualization Tools:** Tableau, Power BI, Qlik
- **ETL & Data Warehousing**: Data modeling, transformation, and automation using PL/SQL, Python (ETL processes)
- **Cloud Platforms:** AWS
- **Tools:** Salesforce, Django, Selenium, Docker, Microsoft Office (Outlook, Word, and Excel)
- **Soft Skills:** communication, teamwork, problem-solving, critical thinking, attention to detail, collaborative, time management, customer service, leadership, innovation, Adaptability, Productivity

RELEVANT EXPERIENCE

Research Assistant, USF, Tampa, USF Feb 2024 – May 2024 & Aug 2024 - present

- **Utilized Python and R for data preprocessing, transformation, and analysis** of the NAIC Insurance Dataset to extract insights from 20 years of financial data.
- Analyzed historical **CMS** Health Care data to preprocess and transform it, aiming to determine market dynamics following the implementation of the Affordable Care Act. I examined various publicly accessible healthcare datasets to identify insurance providers involved from 2011 to 2023.
- Developed multiple R and Python Scripts to accumulate, analyze and combine the information found in **public datasets**. Utilized R Studio for development and stored output in .dat files for future analysis.

Shared Services Intern, BCBSRI, Rhode Island, USA June 2024 – Aug 2024

- Extracted, cleaned, and transformed large datasets using Salesforce and Power BI, ensuring data accuracy and consistency across healthcare product and Rx mappings, and complex Excel file integrations.
- Mapped products to corresponding Rx codes and merged datasets in Power BI, utilizing advanced analysis techniques to identify trends, optimize processes, and provide actionable insights.
- Developed and presented insightful reports and visualizations in Power BI, effectively communicating key data trends to stakeholders, enabling informed decision-making in healthcare operations.

Software Developer Sr, Ceridian HCM, Bangalore, India Jan 2022 – July 2023

- **Developed and implemented SQL queries, functions, and procedures for payroll modules,** ensuring optimized data extraction and reporting for decision-making.
- Led efforts in **data analysis** and **automation** using SQL to enhance payroll data processing by **25**%, providing actionable insights to stakeholders.
- Created interactive dashboards and custom reports for internal teams, utilizing **Power BI** to track performance metrics and trends.
- **Collaborated with stakeholders** to translate business requirements into data-driven solutions, resulting in enhanced reporting workflows and efficiencies.

Senior Software Engineer, Infosys Ltd, Hyderabad, India Nov 2018 – Dec 2021

- Designed and implemented **data models** and automated ETL processes to ensure data integrity and consistency for large-scale data migrations in the telecom domain.
- Automated tasks to increase productivity by 30% and implemented root cause analysis solutions for production issues, ensuring consistent data flow and availability.

- Collaborated with cross-functional teams to gather data and reporting requirements, developing **BI reports** to provide stakeholders with clear, actionable insights.

Software Engineer Trainee, Infosys Ltd, Mysore, India May 2018 – Oct 2018

- The Internship included learning **Python**, RDMS, OOPs, **Data Structures,** Java, UI concepts technologies, and implementing Mobile compare Web Applications.
- We are trained and certified to work with **Java Enterprise Applications** involving Middleware and Backend.

KEY PROJECTS

Profile Details Scraping for Data Analysis, RA, USF Aug 2024 – Present

- This project involves using Python and Selenium to extract detailed profiles of individuals listed on website.
- By employing Selenium for dynamic page rendering and XPath for precise data extraction, the project scrapes personal details such as name, job title, company affiliations, and work history.
- The collected data provides insights into the professional backgrounds of entrepreneurs, Actuary personnel, and Chief Risk Officer's in the company ecosystem, facilitating analysis of individual career trajectories and networking patterns.

Product and Rx Mappings Data Analysis & Implementation of Salesforce Health Cloud, BCBSRI July 2024 – Aug 2024

- Led data analysis on Rx and product mappings in Salesforce, ensuring accuracy and operational efficiency through data extraction, cleaning, and mapping.
- Configured and migrated patient data into Salesforce Health Cloud, integrating it with other healthcare systems for improved patient management.
- Developed automation rules and conducted staff training, optimizing workflows and enhancing care coordination.
- Gained advanced skills in Salesforce data management, data migration, workflow automation, and healthcare data integration.

Data Integration and Automation using Power BI, BCBSRI June 2024 – July 2024

- Automated the extraction and merging of data from 50+ Excel files, reducing processing time by **60%**.
- Applied advanced data transformation techniques, improving reporting efficiency by 20%.
- Integrated and validated multiple datasets, enhancing data accuracy by 35% and saving 40 hours/month.

Mood Prediction of a Spotify User, USF Jan 2024 – Apr 2024

- Analyzed Spotify User Sessions dataset using Machine Learning to **predict if a song will be skipped** in a listening session.
- Based on the unskipped songs, the User mood of a session is classified into **cheerful, romantic, energetic, and chill moods**.
- Implemented LightGBM, Recurrent neural network, and LSTM Algorithms on Keras to classify songs as skipped/unskipped
- The accuracy of skip prediction using LightGBM is 51%, Recurrent Neural Network is 52% and **LSTM is 55%**
- Application to find restaurants in Downtown Chicago and commute to them based on the availability of DIVVY bikes.

Automobile Mileage Prediction Using Polynomial Regression, USF Aug 2023 – Nov 2023

- Utilized **R studio** to develop the machine learning model by taking advantage of Rio, moments, and tidyverse libraries to preprocess, visualize, feature engineer, and **predict the Mileage info** for the Automobile dataset.
- Designed 3 different ML models with polynomial degrees 1, 2, and 3 to achieve an R-score of 91.9 percent on the best model.

Bankruptcy prediction using Machine Learning, USF Aug 2023 – Nov 2023

- Analyzed the American Public Companies Dataset containing various Financial and Economic Indicators for the years 1999-2018.
- Organized the classification Time series dataset in 3 different time slices to **Train, Test, and Validate the** ML model.
- Developed machine learning models using SVM, Random Forest, Gradient Boost, XG Boost, Logistic Regression, and Neural Network Algorithms.
- Achieved the best **accuracy of 95 percent** on test data and 94 percent on train data using the Gradient Boost ML model.

State of Tampa Region Annual Report, USF Sep 2023 – Oct 2023

- Tampa Metropolitan Statistical Area's Authorities required reports about Talent Availability and Affordability.
- Generated **Data Insights and Data Visualization** reports with Social and Economic Indicators across 20 Top Metropolitan Statistical Areas using publicly available data resources like the Bureau of Labour Statistics and Google Trends.
- Utilized **Python and Excel** to Collect, Clean/Transform raw datasets for the Year 2023.
- Tableau was used to develop Histograms; Pie charts and SQL were utilized to query the accumulated dataset.

Insurance Management System, USF Aug 2023 – Nov 2023

- Developed a fully online Insurance Management System that utilizes **Oracle database** to store Insurance data.
- Designed and Implemented the Database schema and created **ER-Diagrams** based on the data storage regulations.
- Performed **performance optimizations** using Normalization, Indexing, Transaction level isolation, and Table Partitioning.
- Visualized Insurance dataset using SQL Queries and **Tableau**. Generated Pie charts, Trend charts, Geo charts, and Bar graphs.

MCPO project, Dayforce Jan 2022 – July 2023

- Implemented data transformation procedures and optimized data models, using **PL/SQL** for payroll and HR systems, empowering users from multiple countries.
- Automated **data processing** workflows to reduce manual intervention, improving data accuracy and reducing errors by 20%.
- Led efforts in developing **self-service BI tools** for teams to access real-time data, resulting in faster decision-making.
- Handled **development** scenarios in the **payroll** domain to create unit test cases and functional and technical reports.

Maven (Conduent) project, Infosys Ltd Nov 2019 – Apr 2021

- Created UI interfaces to display client data using **HL7** format. Utilized **MAVEN** product suite in IntelliJ for implementing disease-specific UI design for CDC.
- Orchestrated Generic CDC to MAVEN mapping and vice versa, utilized Free Marker Template to generate the user interface.

Florida City Gas (FCG) project, Infosys Ltd Nov 2018 – Oct 2019

- Generated detailed reports using **SQL** and collaborated with stakeholders to understand reporting requirements, providing accurate and timely insights.
- Migrated user data from an older system to a new customer information system, utilizing **SQL** for data mapping, ensuring data accuracy during transition.
- The project involved providing SQL queries, analyzing client reporting requirements, providing data mapping for user fields, creating new modules, and preparing functional specification documents.

Complex Square Root using FPGA Hardware, Amrita School of Engineering Aug 2017 – May 2018

- Utilized the Bakshali Algorithm from Vedic Mathematics to calculate the square root of Complex Numbers.
- Programmed algorithm in **Verilog HDL**, deployed on Xlinix Virtex 6 FPGA, and verified power consumption using cadence RTL.
- Reduced the Hardware complexity compared to the traditional CORDIC-based Algorithm. Achieved **Precise and Accurate Square root results** using Numerical Mathematics that are easily programmable.

LEADERSHIP AND AFFILIATIONS

- **Captain**, Volleyball team, organized and taught the team. Nov 2018 – Mar 2020
- **Office Bearers and Executive Member**, SANKHYA (Mathematics club), Amrita Bangalore Aug 2015 – May 2018
- **Organizer**, MATH EXPO to teach Mathematics to school students Aug 2015 – May 2018
- **Lead Organizer**, Pitch Fest, A district level startup incubator event May 2017 – June 2017

HONORS AND AWARDS

- **Codepath Advanced Technical Interview Prep Course** Aug 2024
- **Certificate of Appreciation** from Infosys for active contribution to the project. Feb 2022
- Microsoft Certified **AZ-900 Azure** Fundamentals Developer Aug 2021