SAKSHI GUPTA

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PROFESSIONAL SUMMARY

Data Scientist skilled in Python, SQL, Tableau, and Generative AI application development. I gained data analysis and modeling expertise through three internships and personal projects, emphasizing exploratory data analysis. With 9 years of experience in SAP ABAP, I possess a deep knowledge of enterprise data systems. Explore my portfolio at https://sakshigupta.me/#portfolio.

SKILLS

Machine Learning	Deep Learning	Data Visualization	Data Preparation
EDA	Statistical Analysis	NLP	Agile Methodologies

Technical Skills

Python	SQL	T-SQL	SAP ABAP

Software, Services & Packages

Tableau	Snowflake	Microsoft Excel	SQL Databases
Pytorch	Scikit-learn	Langchain	Streamlit
Pyspark	Microsoft Azure	SAP ERP	SAS Enterprise Miner

EDUCATION

University of North Carolina at Charlotte *(Jan 2022 - Dec 2023)*

- Master of Science in Data Science and Business Analysis (4.0 GPA)
- Secretary of the School of Data Science Student Council
- Instructional Assistant for Database Systems for Data Scientists

Arya College of Engineering and IT *(Aug 2007 - May 2011)*

- Bachelor of Technology in Computer Science (Honors)

PROFESSIONAL EXPERIENCE

Data Science Intern, Sia Partners (Charlotte, NC) *(Jun 2023 - Aug 2023)*

Specialized in analyzing unstructured safeguard data to streamline audit expenses. My role primarily entailed analyzing survey information employing Natural Language Processing approaches and creating Tableau visualizations to communicate the findings. Additionally, I supported the company's Large Language Model (LLM) initiative and contributed to its project refinement.

Accomplishments

- Identified and extracted data from multiple sources using Presto SQL engine to identify the factors driving safeguard audit costs, enabling data-driven decision-making.
- Freed up to 30% of the team's time by streamlining cost framework data and automating related tasks.
- Devised KPIs that allowed the team to track the completion status in each safeguard Google Sheet, enabling accurate and transparent progress tracking.
- Crafted Tableau dashboards using Privacy Risk Assessment responses, providing detailed insights into data collection methods.

Data Analyst Intern, Caring.com (Charlotte, NC) *(Jan 2023 - May 2023)*

Focused on analyzing senior care partners' data to optimize business operations. I utilized Snowflake SQL for exploratory data analysis and employed Looker for visualizations. A crucial part of my role was developing approaches to classify partners at risk of churn and clustering them into tiers, enhancing the efficiency of lead distribution and partner management.

Accomplishments

- Achieved monthly time savings of 2 hours for the Sales Director by designing an automated report on partner associations and streamlining its distribution using Google Apps Script.
- Attempted to classify partners using statistical and tree-based models, but results fell below expectations.
- Effectively segmented Homecare Partners into tiers for personalized engagement using clustering and core statistical methods.

Data Science Associate Intern, Azimuth GRC India *(Jun 2022 - Aug 2022)*

Specialized in developing and managing data pipelines using Microsoft Azure Data Factory. I played a crucial role in automating and enhancing data validation strategies, utilizing T-SQL to create stored procedures. My approach focused on pinpointing errors at the individual record level during bulk ingestion

Accomplishments

- Gained experience in Azure Data Factory (ADF) pipelines and data validation strategies through learning on the go.
- Automated the data quality check process using stored procedures running as an ADF pipeline step, improving the accuracy and efficiency of the data validation process.
- Enabled communication and transparency in the data validation process by creating a Logic Apps step in the pipeline that notifies clients of data issues via email.

Other Experiences

Senior Consultant, HCL Technologies, India *(May 2017 – Feb 2021)*

Associate, Cognizant, India *(Sep 2014 – Apr 2017)*

Application Developer, Fujitsu Consulting, India *(Aug 2011 – Sep 2014)*

- Gained proficiency as an SAP ABAP developer, specializing in reports, form design, system enhancements, and integrations while expertly handling multiple SAP modules.
- Mentored colleagues for smooth integration, demonstrating leadership and fostering their professional growth, with a focus on team collaboration and effective communication.
- Led automation initiatives, streamlined processes like bulk company code updates, and developed a reusable report-generation framework, significantly improving team efficiency.

Data Science/Machine Learning Projects   (Full Portfolio)

LLM-based Chatbot using LangChain   (Launch App)

- Developed an app using the LangChain framework and GPT-3.5 Turbo model, specializing in providing answers related to Bank of America and Wells Fargo's 2022 annual reports.
- Implemented parsing of PDF reports, converting data into vectors for indexing and information retrieval.
- Engineered precise prompts to help the Large Language Model (LLM) decide whether to use the conversation history in context, enhancing the response accuracy and relevance.
- Launched a user-friendly Streamlit application interface for easy access and interaction with Chatbot.

Meme Generation using Deep Learning   (Launch App)

- Implemented the model using Pytorch and encoder-decoder architecture.

- Fine-tuned ResNet50 and InceptionV3 for image encoding and used pre-trained GloVe embeddings on the Twitter dataset for text embeddings.
- Employed text pre-processing, including breaking down hashtags into meaningful tokens, fuzzy matching to optimally align input tokens with GloVe dictionary, n-gram language detection, and Google Translate to translate non-English captions.
- Applied Beam Search with Top-K to select appropriate meme output.
- Evaluated the model using BLEU and BERT scores, ensuring quantifiable benchmarks for assessing the quality and relevance of the generated memes.

Customer Default Prediction – Kaggle AMEX Dataset (View Source)

- Collaborated with a team of four to predict the likelihood of credit card payment defaults.
- Performed Exploratory Data Analysis to identify data irregularities and address imbalances, strategically selecting appropriate resolution techniques.
- Utilized Logistic Regression with VIF-based variable elimination, PCA for feature transformation to address multicollinearity, and the incorporation of SHAP values for model simplification.
- Performed classification including RandomForest, XGBoost, and LightGBM, with hyper-parameter tuning using GridSearchCV, gaining a 5% accuracy boost.

Airline Dashboard (View Dashboard)

- Designed an impactful Tableau Dashboard showcasing comprehensive flight information, utilizing data sourced from the Snowflake Marketplace.
- The dashboard helps answer the following questions:
  - Are there any flights that will take them to their desired destination?
  - Will their desired in-flight service be available on the flight they choose?
  - What is the flight frequency between the source and destination airports, and how can this data inform credit card companies' airline partnerships for loyalty programs?

CERTIFICATIONS

- SnowPro Core - COF-C02
- Microsoft Azure Data Fundamentals - DP-900
- Microsoft Azure AI Fundamentals - AI-900

AWARDS & RECOGNITIONS

- **Secured 3rd position** among 20 teams in the "Reinvent the Wheel 2.0" hackathon organized by Torqata and American Tire Distributors *(Nov 2022)*
- HCL – Received monetary award from the client for implementing their mini project *(Jan 2021)*
- Cognizant - Received **ABCD award** for consistent project deliverables *(Sep 2015)*
- Fujitsu – Received **Spotlight Award** for the accomplishment of critical deliverables *(Nov 2013)*