

# Sai Bhargav Karnati

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## SUMMARY

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Data Science Master's student at UMBC with 2+ years of experience in **data analysis, data visualization, business intelligence, and report generation**. Proficient in developing and maintaining **interactive dashboards** using **Tableau, Power BI, SQL, Python, and Advanced Excel**. Adept at transforming complex data into actionable insights to drive informed decision-making. Strong **analytical, organizational, and problem-solving skills**, with a proven ability to collaborate in team settings. Demonstrated success in delivering accurate, impactful data solutions.

## EDUCATION

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**MPS in Data Science**, *University of Maryland, Baltimore county* 08/2024 – present  
Relevant coursework: Data Management, Introduction to Data Science, Ethical and Legal Issues in Data Science

**Bachelor of Technology in Computer Science**, *Amrita Vishwa Vidyapeetham* 07/2017 – 06/2021  
Relevant coursework: Database Management Systems, Big Data Analytics, Cloud Computing, Web Mining, Machine Learning and Data Mining.  
CGPA 3.5/4.0

## PROFESSIONAL EXPERIENCE

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**Data Analyst**, *SAP Labs* 07/2021 – 09/2023

- Over 2+ years of experience developing scalable business intelligence solutions, including **reports** and **dashboards**, to monitor and optimize **key business metrics** across departments.
- Collaborated** with cross-functional teams to translate business requirements into effective technical solutions, leading to a **15%** increase in data-driven decision-making across departments.
- Migrated reports from legacy systems into **Tableau**, improving data transparency and reducing report generation time by **25%**.
- Tested and troubleshooted reports and PowerBI dashboards**, ensuring data accuracy and optimal performance for decision-makers.
- Documented** and maintained all **reports** and **dashboards**, ensuring clarity and ease of use for stakeholders.

**Research Assistant**, *Amrita Vishwa Vidyapeetham* 11/2023 – 03/2024

- Conducted detailed **data collection and analysis** for a survey on the **digital divide**, applying **data visualization techniques** to present insights.
- Documented and maintained comprehensive records** of chatbot development processes and survey data.
- Applying **domain-specific knowledge** to boost dialogue management in AI-powered chatbots resulted in a 35% increase in accuracy.
- Presented detailed **research findings** at **IEEE IATMSI-2024**, contributing to the field of AI in education with over **1500** attendees.

**Technical Blogger**, *Medium* 03/2024 – present

- Authored **14** technical blog posts on machine learning and data science projects, with a focus on topics like **sentiment analysis, weather forecasting, and credit card fraud detection**, receiving **2400+** views.
- Designed data visualizations** (charts, graphs, and code snippets) using **Tableau and Power BI** to complement articles.
- Tested and reviewed content** for accuracy and clarity before publication, contributing to a professional and credible online presence.
- Managed content development from research to publishing, showcasing strong **organizational and time-management skills**.

## PROJECTS

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**HR Analytics Dashboard**

- Developed a **Power BI** dashboard that identified a **61% overall attrition rate**, with a **32% rate in the Life Sciences sector**, allowing HR to target specific areas for improvement.
- Highlighted high attrition rates among **25-34-year-olds in R&D**, contributing to a **10% decrease in turnover** after implementing data-driven retention strategies.
- Provided strategic insights by analyzing **5+ KPIs**, including attrition rate, gender distribution, job roles, and average age, leading to a **15% improvement** in employee engagement within 6 months.

**Market Sales Prediction Dashboard**

- Created a **Tableau dashboard** integrating **12 months** of sales data from **5 data sources**, providing **real-time insights** and improving sales forecast accuracy by **28%**.
- Utilized **DAX functions** and **ETL processes** to transform and aggregate data, delivering KPIs such as **top-performing states, product categories, and high-value customers**, resulting in a **20% increase in revenue** from top-performing regions.

- Collaborated with business analysts to implement insights, leading to **15% growth in targeted sales campaigns** and a **10% reduction in marketing costs**.

### Credit card Fraud Detection

- Developed a machine learning model using **Python and SQL** that detected fraudulent transactions with an accuracy of **94.16% on training data** and **93.91% on test data**, reducing false positives by **12%**.
- Applied **oversampling techniques** to balance the dataset, improving model performance and increasing fraud detection rates by **15%** compared to baseline models.
- Visualized transaction patterns using **Tableau**, enabling the fraud prevention team to identify and mitigate high-risk transactions, reducing fraudulent activity by **18%** over 3 months.


## SKILLS

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- **Data Visualization:** Tableau, Power BI, Adv. Excel, Matplotlib, Seaborn
- **Programming:** SQL, Python, CPP, JavaScript
- **Databases:** MySQL, Microsoft SQL Server, MongoDB
- **Tools:** Git, Google Colab, Jupyter Notebooks
- **Core Competencies:** Time Management, Collaboration, Report Writing, Communication, Research and Documentation.

## PUBLICATIONS

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**BuddyBot: AI Powered Chatbot for Enhancing English Language Learning** | IEEE 24/04/2024 

This research project centers on developing an advanced AI chatbot. The initiative leverages fine-tuned GPT-2 and FLAN T5 models on a tailored dataset, underscoring proficiency in natural language processing and education technology

## CERTIFICATIONS


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**Modern Big Data Analysis with SQL**, Cloudera 

Specialized in SQL for large-scale data management on distributed systems like HDFS and AWS S3.

**IBM Data Science Professional Certificate**, IBM on Coursera 

Specialized in Python, SQL, data visualization, analysis, and machine learning.

**Machine Learning**, Coursera | Stanford University 

A comprehensive course on supervised and unsupervised learning, data mining, and statistical pattern recognition

## LEADERSHIP & ACTIVITIES

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**Ayudh**, Volunteer Coordinator 03/2018 – 05/2021

- Provided IT support during community service events, ensuring proper setup of digital tools and troubleshooting technical issues.
- Provided supportive service to community members, addressing their needs with care and attention.
- Helped in maintaining an organized and clean distribution area.

**SSR**, Organiser 08/2018 – 01/2020

- Organized and led two-day sessions to motivate students to engage in activities promoting personal development and academic progress.
- Coordinated technical support for student events, ensuring smooth operation of digital tools and platforms to enhance the event experience.

**Amritavarsham**, Student Organizer 08/2018 – 10/2018

- Assisted in setting up and troubleshooting IT equipment for large-scale events, ensuring seamless technical operations.
- Maintained organized records of visitor inquiries and event logistics, contributing to the efficient management of event operations.