

RISHABH BHATT

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SKILLS

- Python | Java | JavaScript | C++ | SQL | NoSQL (MongoDB, DynamoDB, Redis, Neo4j) | Bash | Apache Spark | Apache Airflow
- Cloud Computing | CI/CD | Amazon Web Services | Azure | Data Modeling | Git | Docker | Kubernetes | OOP | Unit Testing
- Django | API (gRPC, REST, GraphQL) | Microservices | Backend | Distributed Systems | Big Data Analytics | Machine Learning

EXPERIENCE

Sr. Data Engineer **KMK Consulting** **08/2023 - Present**

- Design **scalable data infrastructure** for client by understanding **business requirements**, building **data pipelines**, providing aggregated datasets with **low latency queries** to support stable data flow from **data lake** to end-user facing applications
- Led a cross-functional team of data engineers to re-engineer the client's incentive compensation framework using Apache Spark, Airflow, and Streamlit; introduced **real-time analytics** and **automated reporting**, resulting in **>50%** boost in productivity

Skills : Data Modeling, Data Warehousing, ETL, Big Data Analytics, Apache Spark, Apache Airflow, Streamlit

Software Engineer, Part Time **EvoquerBOT** **01/2023 - 08/2023**

- Developed a conversational agent powered by a **Large Language Model (LLM)** to assist customers in completing tasks requiring multiple steps and decisions while incorporate multimodal (voice and vision) customer experiences [\[Conference Proceedings\]](#)
- Deployed on Amazon's EC2 instances for echo devices serving a user base of **>50 million**, I designed the agents backend using a **microservice architecture**. Implementing **containerization**, **caching**, **load balancing** for efficient performance and auto-scaling
- Reduced response latency **30%** and increased relevance **60%** for our language models (LLMs) by designing an **information retrieval system** with **RESTful API** to process complex queries and perform **CRUD** operations on a knowledge **graph database**
- Analysed log data on **CloudWatch** to identify & fix bugs with backend services, communicated findings to engineers at Amazon

Skills : Conversational AI, Natural-language processing (NLP), Django REST framework, AWS (EC2, Lambda, CloudWatch)

Decision Analytics Engineer **ZS Associates** **08/2019 - 04/2021**

- Migrated client's data infrastructure to cloud by gathering **business requirements**, designing **ETL pipelines** to integrate data from multiple sources into production systems, optimizing **OLAP systems**, helping them **save cost** and **grow revenue by 40%**
- Helped clients improve sales by over **25%**, by developing automation tools to process **2+ petabytes** of anonymized longitudinal patient data (**APLD**) using **Marketing Mix models**, and optimizing the sales force through **geospatial territory alignment**
- Increased client's reach **60%**, by applying unsupervised learning algorithms such as **K-Means** to cluster **millions of customers** into segments for **targeted messaging** and analyzing effectiveness of marketing strategies using **A/B Testing**

Skills : OLAP, Big Data Analytics, Hypothesis Testing, AWS (S3, Redshift), PySpark, PostgreSQL, Pandas, Scikit-Learn, Tableau

Software Engineer, Intern **Velankani Electronics** **05/2018 - 07/2018**

- Worked on parking management application to automate various parking processes using **object detection** and **plate recognition**

Skills : Object Detection, Convolutional Neural Networks (CNNs), Computer Vision, C++, OpenCV, Qt

EDUCATION

Pennsylvania State University, Master of Science in Computer Science and Engineering **08/2021 - 05/2023**

Vellore Institute of Technology, Bachelor of Technology in Computer Science spl. in Bioinformatics **08/2015 - 05/2019**

Certifications: [IBM Data Science](#) | [AWS Machine Learning](#) | [ML Stanford University](#) | [Emotional Intelligence NPTEL](#)

PUBLICATIONS

- **EvoquerBot: A multimedia chatbot leveraging synthetic data for cross-domain assistance**, Penn State University
Published : [Alexa Prize TaskBot Challenge 2 Proceedings 2023](#) by Amazon
- **Indian Sign Language Recognition System using Dynamic Segmentation & ML**- Rishabh Bhatt & Dr. Vishal Bharti
Published: GRENZE International Journal of Engineering & Technology, 2020 Vol-6 Issue-1 (ISSN: 2395-5295), pages 27-36
- **Cyberbullying & the need to reform cyber laws in India: The Venus Fly Trap Analogy**- Rishabh Bhatt
Published: OIIRJ Volume-09, July 2019 Special Issue (ISSN: 2249-9598), pages 289-297

PROJECTS

- **Sign2Speech** : Gesture Recognition using memory based neural network trained on skeletal graph data *[PyTorch, MediaPipe]*
- **Tabmatic** : Chrome extension which allows users to manage open tabs with functionalities like auto grouping, saving & reloading current session, helping them save memory and time *[Chrome API, JavaScript, HTML, CSS]*