RISHABH BHATT

State College, PA|rishabhbhatt.app@gmail.com   linkedin.com/in/rishabh-bhatt | rishabhbhatt009.github.io

SKILLS

Back-End	Python, Java, C++, Django, SQL, NoSQL, Microservices, RESTful API Development
Data-Science	Apache Spark, Scikit-Learn, PyTorch, Hugging-Face, TensorFlow, SpaCy, OpenCV, Pandas, Dask, Tableau
Developer-Tools	Git, Docker, Kubernetes, Linux, GitHub Actions, Jira

EXPERIENCE

Software Engineer | EvoquerBOT   Jan 2023 - Present

Skills : PyTorch | Alexa Skills Kit APIs | AWS | Docker | DynamoDB | Neo4j | Microservices | Generative AI

- Build and deploy at scale a multi-modal virtual assistant, to compete against 10 teams selected globally for the Alexa Prize TaskBot Challenge , using the **ASK APIs** to develop an alexa skill. Try it! Say *"Alexa, lets work together"*
- Implemented a scalable and efficient neural response generator by consolidating responses from multiple neural functionalities hosted as isolated microservices containerized with **Docker** , enabling rapid deployment and scalable service delivery
- Enabled 30% faster and 60% more accurate **information retrieval** by designing a persistent knowledge database with a custom **API** to perform **CRUD** operations and query data using natural language input
- Proactively identified bugs with backend services and **API** , and communicated the issues and findings to senior engineers at Amazon

Decision Analytics Associate | ZS Associates   Sept 2019 - Apr 2021

Skills : AWS | Apache Spark | Python | PostgreSQL | Pandas | Scikit-Learn | Matplotlib | Tableau

- Accelerated revenue growth for healthcare clients by **10%** through **digital transformation** , by developing cloud-based data (**ELT**) pipelines to integrate data from numerous sources into **data warehouses** and optimizing analytical workflows with Apache Spark
- Helped clients identify Key Performance Indicators (KPIs) and improve sales by over **25%** , by analyzing anonymized longitudinal data (**APLD**) using **Marketing Mix models** and optimizing the sales force through **geospatial alignment**
- Increased client reach by **40%** by applying unsupervised learning algorithms such as **K-Means** to cluster over **500k customers** into segments and analyzing effectiveness of marketing strategies using **A/B Testing**

Software Engineer (Intern) | Velankani Electronics   May 2018 - Jul 2018

Skills : C++, OpenCV, Qt, CNNs, Graphical User Interface (GUI)

- Saved over **95,000 hours** of work per year by developing a number plate recognition system using convolutional neural networks (CNNs) and integrating it into a interactive graphical user interface using Qt for surveillance.

EDUCATION

Pennsylvania State University - Master of Science in Computer Science, **GPA 3.7**	2021-2023
Vellore Institute of Technology - Bachelor of Technology in Computer Science spl. in Bioinformatics, **GPA 8.23**	2015-2019

Certifications - IBM DS Professional Certification , AWS Machine Learning , ML Stanford University , Emotional Intelligence NPTEL

PROJECTS

Gesture Recognition via skeleton based Deep Neural Network   *Python | Tensorflow | OpenCV | MediaPipe Framework*

- Developed a software that convert gestures to natural language using a Long Short-Term Memory (**LSTM**) network
- Used Google's MediaPipe framework to generate **~5Gbs** of skeletal graph data from over **21k videos** to train the model

Atari Game Bots using Reinforcement Learning (RL)   *PyTorch | OpenAI gym | Matplotlib*

- Trained adversarial bots to play games using Deep-Q-Learning (**DQN**) & Proximal-Policy-Optimization (**PPO**) algorithms
- Performed performance analysis by running over **50k** simulations to meticulously evaluate and identify the most effective algorithm

Analyzing Social Sentiments using scraped tweets   *Python | Scikit-Learn | tweepy | SpaCy | NLTK*

- Used twitter-API to scrape tweets and generate a dataset of over **1.2 million tweets** to perform sentiment analysis in Python
- Built a data dashboard with interactive visualization to analyze public sentiment before and after "Lok Sabha Elections in India"

PUBLICATIONS

- **"Indian Sign Language Recognition System using Adaptable 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