Akash Vishwakarma

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EDUCATION

University of Southern California,   **Los Angeles, CA**
Degree - Masters in computer science   **January 2023 - December 2024**
Coursework: Algorithms, Database, Artificial Intelligence, Machine learning for Data Science,NLP   **GPA: 3.75**

Savitribai Phule Pune University   **Pune, India**
Degree - Bachelor of Engineering in Information Technology   **August 2018 - May 2022**
Coursework: Data Structure, Statistics, Operating System, Big Data, Web Development, Networking   **GPA: 9.51**

TECHNICAL SKILLS

- **Python:** NumPy, Pandas, Scikit-learn, SciPy, Keras, TensorFlow, Matplotlib, Seaborn, Pytorch
- **Languages:** Python, C, C++, Java, HTML, CSS, Javascript, PHP, Flask, Nodejs, Express
- **Tools & Cloud:** Tableau, Power BI, Git and Github, Azure, AWS, Langchain
- **Databases :** MySQL, Hadoop, Oracle Server, PostgreSQL, PySpark, NoSQL, RDBMS, MapReduce, Big Data, large-scale datasets
- **Statistics/Modeling:** Hypotheses Testing, supervised and unsupervised learning, Deep Learning Applications, Predictive modeling

PROFESSIONAL EXPERIENCE

Software Engineer | Vermont Slauson Economic Development Corporation | Los Angeles, California   **December 2023 - Present**
- Leading the development of a custom CRM system, transitioning the company's manual data processes to an efficient web platform.
- Implementing advanced data visualization dashboards for real-time insights and analytics, improving decision-making capabilities.
- Coordinating effectively with cross-functional teams to ensure the CRM system aligns with business requirements, leading to increased efficiency, enhanced data accuracy, and significant time savings.

Data Scientist | Cognizant via Forage   **November 2023 - November 2023**
- Spearheaded a data analysis project aimed at optimizing inventory management for Gala Groceries.
- Faced with the challenge of inefficient inventory management, so led a project to address frequent overstocking and stockout issues.
- Overcame this by developing a machine learning model specifically to predict inventory needs with greater precision and reliability.
- Optimized the stock replenishment process with a strategic model, achieving a more balanced and responsive inventory system.
- Communicated findings and analysis in the form of a PowerPoint slide to present the results back to the business.

Data Analyst | Bracket Infinity | Mumbai, India,   **March 2020 - July 2020**
- Built a Python-based web scraping algorithm to identify and retrieve over 10,000 missing images and comment details from an e-commerce website plagued by loading errors and data gaps.
- Extracted and analyzed product review data, including comment counts and star ratings, to assess customer feedback patterns.
- Synthesized data into reports, visualizing key insights in Tableau to highlight areas with high positive reviews and star ratings.
- Presented findings and methodologies to non-technical stakeholders, effectively communicating complex concepts and solutions.

PROJECTS

Geo-Clustered Analysis | Python, K-means Clustering (Link)   **November 2023**
- Led an innovative air pollution study at USC, utilizing data mining on a 25+ million dataset. Findings informed (SDGs) 11 and 13.
- Employed k-means clustering for regional emission profiling, analyzing pollutants like PM2.5 and NOx.
- Overcame challenges with 100 GB of data, showcasing big data analysis and environmental research skills.

Spam and Ham Classifier | Neural Language Processing, Streamlit, Support Vector Machine (Webiste-Link)   **July 2023**
- Developed spam detection model using SVM algorithms, TF-IDF vectorization, and ML pipeline integration for efficiency.
- Achieved 98% accuracy in distinguishing spam and ham messages, with the capability to classify over 10,000 messages efficiently.
- The system can significantly reduce the influx of unwanted emails, enhancing email management and security for users.

Image Analysis Neural Network Model | Python, CNN, Tensorflow, MLOPS (Github)   **June 2023**
- Crafted a neural network using LeNet-5 architecture, achieving 99.80% accuracy in fashion image classification. This model excels in automated categorization and trend analysis. Rigorously tested across 20+ datasets, it's been effectively integrated into an end-to-end project utilizing MLOPs, and deployed on Heroku.

Tableau and Power BI Dashboard | SQL, Python, Tableau, Excel, PowerBI (Website - Link)   **December 2022**
- Designed HR analytics strategies using Tableau resulting in a 16% attrition rate reduction.
- Identified 56% of attrition in the R&D department and peak attrition within the 25-34 age group on business data
- Transformed pizza sales data into actionable insights using SQL, Power Query, Python, and Power BI.

Forky Forum| HTML, CSS, Javascript, PHP, MySQL (Website - Link)   **December 2020**
- Created a dynamic, responsive website showcasing trending local food reviews and recipes. This platform not only engages users with attractive, interactive content but also includes a comprehensive database system for efficient admin management.

PUBLICATIONS

An android application to mark attendance using fingerprint authentication | (Link)   **December 2015 - May 2018**
- Collaborated with 3-member team to create an Android attendance app, boosting efficiency by 40% and reducing department cycle time by 25%. Implemented secure authentication measures to prevent proxy attendance. (Published - IJRAR.ORG)

LEADERSHIP WORK

- Volunteered for Mind Spark event at DY Patil College, Pune. Collaborated in managing event and other volunteer work.
- Mentored juniors, organized college book-giving, conducted gaming event at DY Patil College, featuring CS:GO and PUBG.
- Led team to 1st place in PUBG tourney, securing 5,000 Rs Prize through strategic coordination and leadership skills.