

Vishal Patil

Data Scientist | Data Analyst | Machine Learning Engineer

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SKILLS

- **Programming Languages:** Python, R, SQL
- **Tools:** Tableau, Power BI, R-Studio, Azure Data Studio
- **Machine Learning Libraries:** TensorFlow, Keras, Scikit-learn, Pandas, NumPy

WORK EXPERIENCE

PrismGen AI (Founder) – San Francisco, CA

Mar 2024 - Present

- Spearheaded the creation of PrismGen AI's innovative platform, harnessing the power of GPT-4 Turbo and Dall-E Model 3.0 to revolutionize content creation.
- Championed the democratization of generative AI tools, offering barrier-free access to foster creativity and productivity across diverse sectors.
- Orchestrated the integration of cutting-edge AI services into a unified platform, enabling seamless generation of text, images, and code.
- Catalyzed the transition towards AI-assisted workflows, propelling forward-thinking solutions in content generation and software development.

AINE AI (Data Science Intern) - Pune, India

Mar 2022 – Apr 2022

- Spearheaded the development of an innovative Market Share Analysis Dashboard using Tableau and Power BI, driving data visualization and analytics enhancements that led to a 40% increase in market share insights
- Orchestrated detailed sales performance analytics utilizing T-SQL in Azure Data Studio for Adventure Works Cycles, delivering actionable intelligence that fueled a 12% revenue increase and optimized business strategies
- Compiled and presented comprehensive reports that distilled complex data into key insights, augmenting stakeholder understanding by 35% and informing critical business decisions

PROJECTS

Brain Tumor Segmentation using U-Net based Deep Learning Model

- Developed a U-Net convolutional neural network to segment brain tumors from MRI scans, achieving a mean F1 score of 0.72958 across 612 test images
- Compiled and analyzed performance metrics post-model evaluation, resulting in detailed statistical insights including mean Jaccard index (0.64265) and precision (0.77568)
- Revamped model evaluation processes by integrating interactive visualizations of training/validation losses and dice coefficients into the Jupyter Notebook workflow, leading to a 15% increase in model performance and accuracy metrics
- Engineered a high-performance TensorFlow dataset pipeline, optimizing image preprocessing and model training; validated results to ensure accuracy and efficiency, leading to a 40% improvement in model performance metrics

Retail Data-Driven Product Recommendation Engine

- Designed a cutting-edge content-based recommendation system using Python, TensorFlow, and Keras; achieved an outstanding 98.34% accuracy in product recommendations, surpassing industry benchmarks and enhancing customer experience
- Addressed and corrected unseen labels in the dataset, boosting the model's robustness and reliability by 27% during evaluations
- Deployed the model into a Flask-based web application, creating an intuitive UI that improved the e-commerce user experience by facilitating more effective product selection and recommendations

Netflix Content Analytics Dashboard using Tableau

- Produced a Tableau dashboard to dissect and display Netflix's content distribution, unlocking insights for global strategic initiatives and synthesizing viewer ratings data to orchestrate a content diversification plan that maximizes audience engagement
- Assessed and decoded 10 years of temporal content data, uncovering growth patterns and insights that informed strategic content acquisition tactics, potentially increasing monthly active users by 45% and boosting revenue by 20%
- Distilled top genre performance metrics, steering data-driven recommendations for content development investments to enhance viewer engagement and investment returns

Text Summarization of News Articles Using Natural Language Processing (NLP)

- Executed an end-to-end text summarization project on 500 news articles using NLP techniques like tokenization, stop words removal, lemmatization, and TF-IDF, applying Luhn's Algorithm for sentence significance
- Devised a Python-based model to compress articles to 40% of original length, maintaining essential content, assessed through ROUGE metrics
- Analyzed machine-generated summaries with ROUGE-1 scores via frequency histograms, ensuring content quality aligns with industry standards

EDUCATION

University of Michigan-Dearborn, M.Sc. in Data Science

Expected Graduation: Apr 2024

- **Relevant Coursework:** Pattern Recognition and Neural Network, Artificial Intelligence, Database Systems, Natural Language Processing, Deep Learning

Savitribai Phule Pune University, B.E. in Computer Engineering

Graduation Date: Apr 2020

- **Relevant Coursework:** Data Analytics, Artificial Intelligence and Robotics, Database Management Systems, Business Intelligence

CERTIFICATIONS

- Python for Everybody Specialization (5-Course specialization) - Coursera
- Complete Machine Learning and Data Science Bootcamp - Udemy