SAISRI VISHWANATH

saisrivishwanath@gmail.com • +1 (680) 223 3884 • https://www.linkedin.com/in/saisrivishwanath/ • https://github.com/saisri0102

EDUCATION

Syracuse University, Master of Science in Computer Science (GPA: 3.7/4) | MERIT SCHOLAR **Jan 2023 - Dec 2024**
Coursework: Statistics, Machine Learning, Natural Language Processing, Reinforcement Learning, Large Language Models, Data Mining and Analytics
PES University, Bachelor of Engineering in Electronics and Communication (GPA: 9/10) | MERIT SCHOLAR **Aug 2017 - May 2021**
Coursework: Mathematics, Algorithms, Object-Oriented Programming, Operating Systems, Artificial Neural Networks, Deep Learning, Data Science

TECHNICAL SKILLS

- **Languages/Database:** Python, Java, JavaScript, HTML, CSS, SQL, Oracle Database, MySQL, SQL Server, Pinecone (vector database)
- **Frameworks:** PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, Keras, Matplotlib, NLTK, LangChain, Flask, FastAPI, React, Node.js
- **Tools:** Tableau, Snowflake, Git, JIRA, Agile/Scrum, Docker, AWS EC2, Sagemaker, Postman, HuggingFace, Power BI, Excel, Apache Spark

PROFESSIONAL EXPERIENCE

Software Engineer - Syracuse University **Syracuse, NY** **Feb 2025 - Present**

- Built an **LLM-powered research assistant** for easy access to university research documents by combining **semantic search** (BERT + cosine similarity), **RAG** architecture (OpenAI + Pinecone), and contextual summarization via prompt engineering, boosting retrieval precision by 30%
- Applied **NER** and sentiment analysis to extract key entities and evaluate user feedback, enhancing contextual relevance and response accuracy
- Developed and deployed the backend for the LLM research assistant using **FastAPI**, creating API endpoints for user queries and information retrieval, and containerized the application with **Docker** for scalable deployment and testing
- Built a mental health risk scoring model using psychological survey data and behavioral logs, applying **regression techniques** to predict wellness scores with an **Mean Absolute Error (MAE)** of 0.42, enabling early intervention for at-risk students

Associate Developer - Oracle **Bangalore, India** **July 2021 - Dec 2022**

- Led the **end-to-end migration** of employee lifecycle data to **Oracle Cloud Infrastructure(OCI)**, conducting detailed root cause analysis on data discrepancies and implementing validation scripts to ensure 100% data integrity across 1M+ records
- Developed **30+ complex SQL analytical reports** to support workforce planning and compliance, reducing report execution time by 50%
- Reduced data processing time by 40% through efficient **SQL-based ETL** processes, integrating **data warehouses**, and **APIs** seamlessly
- Built and maintained 20+ interactive **dashboards** in **Tableau** to track hiring trends, attrition rates, and employee performance KPIs, enabling a 30% increase in data-driven decision-making across business teams
- Performed comprehensive **EDA**, **anomaly detection**, and dimensionality reduction with **PCA** on 500k+ employee records, uncovering critical patterns and outliers that informed feature engineering and boosted downstream forecasting accuracy by 20%
- Leveraged **statistical analysis** and **regression modeling** skills to improve operational efficiency by 25% through analysis of key business data
- Managed diverse data projects by employing **Jira** for task tracking and **Confluence** for comprehensive documentation and knowledge sharing
- Trained **40+** new hires on advanced SQL tools and best practices, elevating overall team proficiency and readiness by 20% across operations

Software Developer - Publicis Sapient **Bangalore, India** **Jan 2021 - June 2021**

- Improved product image classification accuracy by 15% for an e-commerce vehicle parts platform using **transfer learning** with **VGG** and **GAN**-based data augmentation, enhancing product tagging for accurate search
- Built and deployed a demand forecasting model using **Random Forest Regressor** to predict product-level inventory needs, leveraging **feature importance** to identify key demand drivers and reducing stockouts and overstock by 17% through data-informed inventory planning
- Performed customer segmentation using **K-Means clustering** on behavioral and demographic data to personalize marketing campaigns, and conducted **A/B testing** on targeted strategies, reducing **customer acquisition cost (CAC)** by 20%
- Built a hybrid recommendation system combining **matrix factorization (SVD)** and content-based filtering using **TF-IDF** vectorisation to predict user engagement scores, achieving an **RMSE** of 0.62 and enabling personalized product rankings and smarter inventory prioritization
- Improved project efficiency and reproducibility through **MLOps**: leveraged **AWS SageMaker** for scalable model development, **GitHub** for version control, and CI/CD automation of end-to-end data and model workflows

PROJECTS

Flight Delay Prediction - ML, Python, Keras, Tensorflow **Jan 2024 - May 2024**

- Designed and implemented a **stacking ensemble** model combining **Gradient Boosting** and **Logistic Regression** to predict airline arrival times, leveraging **GridSearchCV** for hyperparameter optimization and achieving 0.6 predictive accuracy

Grammar Error Corrector - Python, NLP, RNN, LSTM, NLTK, PyTorch **Aug 2023 - Dec 2023**

- Addressed grammar correction challenges by developing a **Seq2Seq Encoder-Decoder** model with **attention mechanism**, performing extensive preprocessing on Lang-8 Corpus, and improving text quality with a **BLEU** score of 0.7

Brain Controlled Interface for Controlling Robotic Arm - Python, numPy, TensorFlow, Pandas **Aug 2020 - Apr 2021**

- Developed a brain-controlled interface using EEG signals and an **Artificial Neural Network (ANN)** to enable paralyzed patients to control a robotic arm, incorporating **early stopping** and **10-fold cross-validation** to achieve an F1 score of 0.8