VIGNESH THALUR JAYACHANDRAKUMAR

+1 716-547-1968 — vigneshtj2404@gmail.com — linkedin.com/in/vignesh-t-j/ — github.com/TJ-dotcom — Buffalo, NY

Education

State University of New York at Buffalo **01/2024 – Present**
MS in Engineering Science (Data Science)

Sri Venkateswara College of Engineering **08/2018 – 07/2022**
Bachelor of Engineering in Electronics and Communications

Skills

Cloud AWS (EC2, S3, RDS), Azure, Snowflake
Database MySQL, PostgreSQL, MongoDB
Languages Python, SQL, R, Bash, SAS, Stata
CI/CD Git, Docker, Jenkins
Tools Power BI, Hadoop, Spark, Tableau
Libraries Pandas, NumPy, FastAI, Matplotlib, Seaborn, TensorFlow, Scikit-learn
Soft Skills Analytical Thinking, Data-Driven Decision Making, Communication, Collaboration, Adaptability

Experience

Copani **01/2025 – present**
AI application developer *Buffalo, USA*
- Designed and implemented advanced transformer-based models for text-to-text processing, enabling automated customer interactions that generate leads, resolve queries, and log conversations seamlessly.
- Integrated natural language understanding (NLU) and natural language generation (NLG) capabilities into the system to ensure smooth, context-aware communication with customers, enhancing user satisfaction and engagement.
- Developed AI-driven chatbots and virtual assistants capable of understanding complex technical inquiries related to industrial engineering products, improving response accuracy and reducing human intervention

Cognizant **11/2022 – 06/2023**
Software Engineer Trainee (Programmer Analyst) *Chennai, India*
Client: Country Financial
- Optimized data pipelines by developing and implementing SQL queries and stored procedures, improving data flow efficiency by 25%.
- Resolved real-time database issues under pressure, reducing downtime by 15% through collaboration with cross-functional teams exhibiting analytical thinking.
- Enhanced operational efficiency by streamlining payment reversal processes and billing workflows, aligning with client requirements and regulatory standards.
- Demonstrated adaptability and problem-solving skills during early-stage project implementation, delivering impactful results under tight deadlines.

Projects

Property Price Forecast **05/2024**
- Hand-picked a dataset with unique features for predicting house prices.
- Performed EDA, PCA, and preprocessing to clean and transform the data.
- Implemented machine learning algorithms (Linear Regression, Random Forest) to achieve an accuracy of 87%.
- Deployed the model using Docker, showcasing project management and communication skills.

Customer Segmentation **09/2024 – 11/2024**
- Designed a scalable database solution using PostgreSQL, enhancing data retrieval speed by 30%.
- Replaced Excel with advanced database features like referential integrity, concurrent access, and security measures.
- Integrated Power BI for reporting and analytics, enabling data-driven decision-making in library operations.

Optimizing Library Management **10/2024 – 11/2024**
- Developed a scalable database solution using PostgreSQL to enhance library management, improving data accuracy and retrieval speed by 20%.
- Replaced Excel with advanced database features like referential integrity, concurrent access, and security measures.
- Integrated reporting and analytics capabilities using Power BI to support data-driven decision-making in library operations.

Wireless Sensor Networks with Fuzzy Ant Colony Optimization **03/2022 – 06/2022**
- Analyzed network traffic, sensor node power, and distance to determine optimal data routing strategies.
- Implemented ant colony optimization and fuzzy logic, improving energy efficiency by 20%.
- Designed a solution using Graph Neural Networks (GNNs) to optimize energy savings in wireless sensor networks.