

VIGNESH THALUR JAYACHANDRAKUMAR

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Education

State University of New York at Buffalo

Jan 2024 - Present

MS, Engineering Science (Data Science)

Sri Venkateswara College of Engineering

Aug 2018 - Jul 2022

Bachelor of Engineering, Electronics and Communications

Skills

- **Cloud:** AWS
- **Database:** MySQL, PostgreSQL, MongoDB
- **Languages:** Python, SQL, R
- **CI/CD:** Git, Docker, Jenkins
- **Tools:** Power BI, Hadoop, Spark
- **Libraries:** Pandas, NumPy, FastAI, Matplotlib, Seaborn, TensorFlow, Scikit-learn
- **Soft Skills:** Analytical Thinking, Data-Driven Decision Making, Communication, Collaboration, Adaptability

Experience

Copani | Artificial Intelligence developer

Jan 2025 - Present

- Designed and implemented transformer-based machine learning models for advanced text-to-text processing, enabling automated customer interactions that drive lead generation, resolve queries, and log conversations seamlessly.
- Integrated Natural Language Understanding (NLU) and Natural Language Generation (NLG) capabilities into AI systems to ensure context-aware communication, significantly enhancing user satisfaction and engagement.
- Developed and deployed AI-driven chatbots and virtual assistants tailored for handling complex technical inquiries related to industrial engineering products, resulting in improved response accuracy and reduced reliance on human intervention.

Cognizant | Software Engineer Trainee (Programmer Analyst)

Nov 2022 - Jun 2023

Client: Country Financial

- Optimized data pipelines by designing and implementing SQL queries and stored procedures, resulting in a 25% improvement in data flow efficiency.
- Resolved real-time database issues, reducing downtime by 15% through collaboration with cross-functional teams, leveraging analytical thinking to ensure system reliability.
- Enhanced operational efficiency by streamlining payment reversal processes and billing workflows, aligning with client requirements and regulatory standards.
- Adapted to early-stage project challenges, improving project outcomes and meeting tight deadlines through effective problem-solving skills

Projects

Property Price Forecast

May 2024 - May 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

Sep 2024 - Nov 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

Oct 2024 - Nov 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

Mar 2022 - Jun 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.