Tanwin Chowdary, Gunturu

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WORK EXPERIENCE

Data Analyst, JerseySTEM.org (Florham Park, NJ): Mar 2024

- Transitioned database from **Excel to MySQL using Alteryx and Airflow**, ensuring data integrity and accessibility.
- Collaborated with a team of 5 to develop an AppSheet-based app, "Activity Log," for tracking employee work activity.
- Developed and deployed an automated data pipeline with MySQL and Airflow, improving analysis of employee engagement and program efficacy by 40%.
- Initiated daily AppSheet reports, enhancing project tracking efficiency by 30%.
- Implemented Jira and Agile methodologies, increasing data analytics project management productivity by 25%.

PROJECTS

Hospital Data Analysis Project: *Azure (Data Factory, Data Lake, SQL Database, Databricks), Power BI*

- Engineered a data analytics solution using Azure tools for EU hospital data trend analysis, processing data from 5+ sources.
- Leveraged Azure Monitor to ensure 99.9% pipeline efficiency and reliability, allowing for seamless real-time reporting.

Forest Fire Management using Deep Reinforcement Learning: *Python, PyTorch, OpenAI Gym, OpenCV, Deep RL*

- Developed an RL system for forest fire management, training models on 200,000+ state-action pairs in both stochastic and deterministic environments.
- Coordinated a team of 3, improving response efficiency by 30% using SARSA, Q-Learning, DQN, DDQN, and other Deep RL algorithms.
- Pioneered a custom-built RL environment, advancing machine learning applications in environmental preservation and disaster mitigation.

Path Estimation Using Stereo Vision Odometry (F1tenth car simulation): *ROSpy, Gazebo, SIFT, SfM*

- Led a visual odometry project using SIFT and Gazebo for high-fidelity simulation of an F1-10th scale car.
- Enhanced depth estimation with Stereo Odometry and SfM, achieving 80% accuracy in autonomous trajectory mapping.

Predictive Sales Analysis and Web Application Development: *Java, HDFS, Spark, Python, Pandas, Numpy, Streamlit*

- Crafted a sales forecasting model with 62% predictive accuracy using Random Forest Regression, fine-tuning over 400 individual estimators for optimal parameter settings, thereby bolstering both the dependability and the effectiveness of the model.

Real-Time Human Body Pose Estimation and Analysis: *Python, MediaPipe, OpenCV, Machine Learning*

- Achieved robust pose tracking across facial features, hands, and limbs, advancing applications in VR, gaming, and motion analysis.
- Implemented a pose estimation model with 83% accuracy, tracking and analyzing key joint movements using BlazePose, MediaPipe, and OpenCV.

EDUCATION

Master of Science: Artificial Intelligence and Robotics, University at Buffalo SUNY, USA Jan 2024

Bachelor of Engineering: Computer Science, **SRM University AP**, India May 2022

SKILLS

- **Languages & Libraries:** Python, Java, JavaScript, R, TensorFlow, PyTorch, ROSpy, Gazebo, OpenCV, OpenAI Gym.
- **Data Science & Engineering:** Pandas, NumPy, Hadoop, Spark, ETL (NiFi, Talend), SQL/NoSQL, MongoDB.
- **Machine Learning & Robotics:** Deep Learning, Reinforcement Learning, Computer Vision, Simulation & Modeling, Stereo Vision Odometry.
- **Tools & Platforms:** Git, Tableau, Power BI, AWS, Azure, Matplotlib, Seaborn, Jira.

CERTIFICATIONS AND ACHIEVEMENTS

- Earned the **AppSheet Business Application Creator Certification**, scoring higher than 80%, in recognition of proficiency in developing business applications (March 2024).
- Spearheaded financial management as **City Manager at Make A Difference (MAD) Initiative**, Vijayawada (Aug 2018 - Jun 2022), implementing cost-cutting strategies and managing budgets, which honed my leadership and strategic financial planning skills.