Huy Huynh

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Education

Missouri State University May 2023

- Bachelor of Science in Computer Science | GPA: 3.7
- International Leadership Scholarship (2019 - 2023)
- Dean's list for 7 consecutive semesters

Work Experience

Data Engineer Intern | City Utilities of Springfield November 2021 – December 2022

- Orchestrated the collection and aggregation of historical data spanning over several years, compiling a comprehensive dataset for business intelligence and insights.
- Implemented, and maintained Azure data factory pipelines for efficient ETL processes, ingesting and processing daily data using Apache Spark and storing it in Delta Lake.
- Consolidated 20+ SQL servers into a centralized architecture, reducing hardware cost, improving data management and query performance for various applications.
- Oversaw a repository of databases, providing essential data support to staff members across diverse departments, including Network, Application, Business Intelligence, and Security.
- Automated manual tasks using Shell script, significantly reducing manual intervention, improving data accuracy, and optimizing overall process efficiency.

Research Analyst Assistant | Missouri State University June 2021 – June 2022

- Utilized TensorFlow to implement Proximal Policy Optimization algorithm for StarCraft 2 multi-agent reinforcement learning environment using the PySC2 library.
- Automated data pipelines with multithreading techniques to optimize data processing, minimize processing time, and maximize hardware utilization.
- Analyzed models performance and other relevant metrics, such as weights, gradients, rewards, and win rate, using Weights and Bias to determine new parameters for enhanced model performance.

Projects

Person Reidentification on A Camera Network August 2021 – December 2021

- Managed a team of 7 members to develop a robust proof of concept for a person reidentification system using PyTorch, OpenCV, and the DBSCAN clustering method.
- Designed and implemented the framework of the core application, facilitating the seamless development of individual modules and ensuring modularity for future scalability.
- Developed the feature extraction module, achieving impressive performance with the capability to extract features from up to 50 images per second and organize them chronologically.

2048 Reinforcement Learning Bot January 2022 – August 2022

- Developed a custom game engine in Python and established an API that allowed seamless integration with reinforcement learning scripts while enabling score tracking for performance evaluation.
- Implemented Temporal Difference Double Deep Q Network (TD-DDQN) to address the overestimation problem in traditional Deep Q Networks, resulting in more stable and accurate Q-value predictions.

Technical Skills

Languages: Python, C++, C, Golang, SQL, T-SQL Shell script, JavaScript

Tools: Databricks, Apache Spark, Azure Data Factory, Git, Redgate, PostgreSQL, Microsoft SQL servers, Oracle

Frameworks/libraries: TensorFlow, PyTorch, pandas, NumPy, Matplotlib