Andres Gutierrez

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EXPERIENCE

Data Engineer — Sept 2023 – Current
ByteBridge Consulting LLC — *Remote*
- Arbitrated enterprise-wide data-related issues for Fintech Startup, effectively troubleshooting and mitigating risks to maintain optimal data integrity and availability across 20 diverse data sources from S3 and APIs processing 50GB daily.
- Designed and executed a scalable cloud-based data architecture on AWS, using Glue and ETL pipelines with Data Spark, facilitating real-time insights for data-driven decision making.
- Architected complex ETL workflows to abstract data from APIs, employing PySpark, Pandas and related Python libraries to devise data manipulation functions. These functions seamlessly performed merge-and-update operations across multiple sources.
- Directed end-to-end ETL jobs via Apache Airflow, refining workflow scheduling and monitoring for seamless integration of AppsFlyer data.
- Improved data processing efficiency and timeliness by 30%, achieving noteworthy reductions in overall processing time.
- Led the unification of disparate data sources into a singular, efficient AWS PostgreSQL instance, augmenting data accessibility and utility.

Undergraduate Researcher — Apr 2020 – Feb 2022
University of California - San Diego — *La Jolla, CA*
- Automated data extraction from camera and LIDAR ROS Topics from large ROSBAGS by creating a Python and ROS pipeline, resulting in time savings of 40%
- Successfully trained a Python-based object detector model to identify and extract over 3,100 stop signs, significantly contributing to a comprehensive Dataset
- Actively collaborated in the development of a Docker image for edge computing on Jetson Xavier NX, leveraging TensorRT capabilities to improve pose estimation inference efficiency by 35%

Undergraduate Researcher — Sep 2019 – Jun 2020
Early Research Scholar Program at University of California - San Diego — *La Jolla, CA*
- Employed regression and classification algorithms to generate workout recommendations
- Implemented numerous machine learning models using Python, Keras, TensorFlow, Pandas, NumPy, and scikit-learn
- Led a small team of undergraduates to present a year-long research project

Software Engineering Intern — Jul 2019 – Sep 2019
Hydranautics — *Oceanside, CA*
- Optimized SQL Server queries, reducing average query run time by 45%
- Automated data extraction process using a Python parser, leading to improved product evaluation
- Conducted capacity analyses, facilitating a 15% increase in operational efficiency

TECHNICAL SKILLS

Relevant Courses: Operating Systems, Data Structures and Algorithms, Computer Security, Computer Networks
Languages: Python, C/C++, JavaScript, SQL
Developer Tools: Git, Docker, NMAP, Apache Airflow, Apache Spark
Libraries: Pandas, PySpark, NumPy, boto3, peewee

PROJECTS

OSI Model's Data Link Layer Simulation | *C++, CMake, Linux Networking* — Mar 2022 – Apr 2022
- Engineered a reliable Stop and Wait ARQ Client-Server application in C++, ensuring 100% message reliability
- Incorporated multi-threading to support multiple clients simultaneously
- Enhanced message reliability by implementing mechanisms to handle dropped packets, resulting in error-free message transmission

EDUCATION

University of California - San Diego — La Jolla, CA
Bachelor of Science in Computer Engineering — *June 2022*