

Mohanad Osman

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PROFESSIONAL EXPERIENCE

Data Engineer

August 2020 – Present

Jzanus LTD, Franklin Square, NY

- Lead the migration of several **databases** from an old server to new **Azure** server instances; increasing the speed of several daily processes and saving a total of ~90 minutes a day.
- Optimized the daily **ETL data pipeline** for flat-file data, ensuring accurate mirroring of source database using advanced **T-SQL stored procedures, functions, and Shell** scripts. Maintained data integrity and consistency, processing tens of thousands of entries daily.
- Enhanced **database integrity** and accuracy by reloading over 3 million historical data points using advanced **Shell** scripts. Reconciled 900+ entries with the source database, ensuring up-to-date records and accurate display of open accounts for managerial action.
- Built and maintained **SQL queries, stored procedures, and functions** using **Joins, Pivot tables, indices, and nested queries**, improving database performance and query efficiency.
- Optimized client data imports from EHR systems like Epic, Meditech, and Allscripts, enhancing operational efficiency.
- Maintained and debugged a **C# MVC** application calling external **API**, serving 5 managers. Collaborated with the senior developer and vendor to resolve data accuracy issues, ensuring timely and accurate data retrieval.
- Developed a dynamic daily data analysis report using **SSRS**, integrating 50+ data points from 13 tables into a user-friendly format. Streamlined data into monthly summaries utilizing advanced aggregate and scalar functions.
- Enhanced reliability of a daily import process by dividing it into 50+ individual SQL transactions, mitigating issues caused by spotty connections and ensuring consistent data import.
- Implemented modular **Python** scripts to **batch** split outgoing data; reducing export time by 40%.
- Collaborated with product managers to develop and restructure SQL reports and stored procedures used by 100s of billing agents, enhancing data accuracy and operational efficiency.

Common Core Instructor

March 2017 – May 2017

Khan's Tutorial, Queens, NY

- Independently led daily reading, writing, and arithmetic lesson plans that improved diagnostic scores for 12+ elementary school students by 10%
- Provided 20+ extra arithmetic problems for 8 underperforming students, improving their diagnostic score by 20%
- Volunteered to substitute for 6+ Math and English instructors, maintaining momentum/progress of course curriculum

EDUCATION

City University of New York – Queens College, Queens, NY

July 2017 - December 2019

Bachelor of Arts, Computer Science

SELECTED DATA PROJECTS

Movie Review Analysis

- Trained **Naive Bayes** classifier sentiment analysis model on 10,000 movie reviews in **Python**; returning 74% accuracy for positive reviews and 89% accuracy for negative reviews on testing data.
- Preprocessed text data by implementing tokenization, stopword removal, and vectorization in **Pyspark**; increasing accuracy by 50%
- Used **JSON** files to store and reduce data processing time of 14,000+ reviews by 50%

Flashcards SaaS

- Deployed an **AI** flashcard creation tool to help students study effectively. Using **NextJS**, and **AWS EC2**
- Utilized **OpenAI API** to generate flashcards from user input; eliminating manual card creation.
- Implemented **Clerk** and **Stripe** services to efficiently create users and accept payments