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| Data Engineer  Wesley Lau | (571) 354-9369 | [wesleylau.wcl@gmail.com](mailto:wesleylau.wcl@gmail.com)  [LinkedIn Profile](https://www.linkedin.com/in/wesley-lau-34a8b374/) |

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| **Python**  PyTorch, pandas, dbt, PySpark, boto3 | **Database Management**  Oracle, Postgres, SQL Server, MySQL | **Data Visualization**  Power BI, Tableau, Excel |
| **AWS**  S3, Athena, Glue, DynamoDB | **Non-structural Data Structure**  MongoDB, Neo4j, JSON, XML | **Tools**  Git, Docker, Jira, Atlassian, SharePoint |

# Technical Proficiencies

# Work Experience

Essential Software, Inc

Data Engineer **–** National Cancer Institute –ContractDec 2022 - Jan 2025

* Expanded existing data model (Neo4j) to integrate incoming structural and non-structural data from various system.
* Refactored the ETL workflow to support new data entities, attributes, and relationships from the updated data model, maintaining data integrity.
* Optimized the existing data pipeline by revamping the Python data loader, increasing overall data loading speed.
* Implemented event-driven ETL automation with AWS Lambda that triggered the ETL process based on S3 uploads.
* Developed a Node.js API that bridged interactions between front-end application and MongoDB.

Constellation Software Engineering

Data Analyst – Department of Homeland Security – Contract May 2021 - Nov 2022

* Collaborated with SME and stakeholders to gather data requirements and create data governance policy, established governance framework.
* Assisted in designing and developing an Enterprise data warehouse solution for housing data from different agencies.
* Developed and implemented a structured migration plan to import data from multiple data sources, including non-structural and structural data, to the centralize data repository.
* Built dashboards in Tableau to monitor and validate data quality during and post-migration.

Data Analyst – DHS FEMA – Contract Aug 2018 – May 2021

* Developed data pipelines using PySpark to ingest and transform legacy data from Oracle and Postgres and load them into centralize AWS S3 data lake.
* Designed and implemented a complex AWS Athena query system to retrieve and process data from AWS S3 data lake, enabling faster insights for the data science team.
* Collaborated with stakeholders to create standardized data models and enforce consistency across relational databases (AWS Aurora, Oracle) and non-structural repository (AWS S3, DynamoDB).
* Conducted in-depth data profiling and data validation, guaranteeing reliability for analytics workflows utilized by the data science team.
* Built a layered data architecture with a normalized central Layer and a staging Area; tailored data marts for end users with different needs

4c Decisions

Data Analyst – Flagstar Bank – Contract Oct 2017 – Aug 2018

* Developed and deployed an efficient custom ETL framework that parsed complex XML structures along with JSON datasets into MongoDB; streamlined data processing workflows, saving approximately 30 hours per month.
* Created comprehensive ER diagrams to support business requirements and improve communication between stakeholders and the technical team.
* Provided infrastructure for user authentication and access token within Qlik.
* Designed interactive data visualizations for 230 non-technical employees, simplifying complex data sets and facilitating better decision-making, increased data comprehension and actionable insights across the organization.

DATA Analyst – First Guarantee Mortgage Company – Contract Sept 2016 – Sept 2017

* Leveraged SQL, Python, and Qlik Sense to analyze 20TB of data and improved business decisions making.
* Designed a comprehensive data visualization dashboard leveraging Qlik Sense to convey complicated data sets to the business Analysts for improving customer’s experience.
* Engineered a robust Talend ETL pipeline to seamlessly transfer large datasets from an Oracle database into MongoDB; increased data accessibility for business analysts by ensuring integration was completed within two hours daily.

# Certification

Meta Database engineer Jan 2025

Google advanced data analytics specialization Mar 2024

Qlik sense data architect-v3 Sept 2017

# Education

Bachelor of Science in ENGINEERING – Olivet Nazarene University – Bourbonnais, IL Jun 2016

Majors: Electrical Engineering