# Daniel Zhilyayev

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**Data Driven Software Engineer with 5+ Years of Industry Experience**

- **Programming Languages:** Python | Java | Objective C | C# | C++ | SQL | SAS | JavaScript | HTML | CSS | Scheme | Racket
- **Libraries:** Pandas | NumPy | SciPy | Scikit-Learn | TensorFlow | Seaborn | Matplotlib | OpenCV | PyTorch | Requests| Scrapy
- **Technologies:** Hadoop | Spark | Databricks | Git | Docker | Azure | MS BI | AWS | S3 | Redshift | Tableau | NoSQL | MSSQL

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**Software Engineer L3 Associate | TD Ameritrade Corp.** | (Java, Python, SQL, C++) | TO, CA **Sep 2022 - Jan 2023**

- Trained and deployed multiclass classification models to strengthen data governance and enhance monitoring capabilities.
- Enforced NLP to classify customer requests in the Easy Web App to create a coherent recommendation system at L6 division.
- Delivered prioritization algorithms that improved response efficiency by over 45% in the SIT environment for the 4.49 release.
- Automated the user authentication process using Apache Oozie during the development of inheritance architecture for MIA.

**Data Engineering Intern | TD Bank - US Division** | (Python, SQL, JavaScript, Spark) | TO, CA **May 2022 - Sep 2022**

- Reconstructed the ETL pipeline for daily, weekly, and monthly jobs to reduce latency for the DART fraud detection model.
- Translated scripts from HQL to PySpark during the merge to Microsoft Azure which optimized the query runtime by 75%.
- Worked alongside the BD Pod to discover partition overload in the CMS1 database, down scaled the partition excess by 1/3.
- Developed a data fetching component in Python to save developers 5+ hours per sprint in validating the data via HQL.

**Machine Learning Engineer Intern | University of Toronto** | (Azure, Python, SQL) | TO, CA **Feb 2022 - May 2022**

- Induced LIWC-22 to carry out NLP throughout the sentimental analysis and pre-processed the performance data on Azure Databricks.
- Developed a Python application to scrape through the yearly reports to disclose performance for 60,000+ applicants at the university.
- Refined machine learning models to predict professor term performance with 20+ years of evaluation data for the staff members.

**Cyber Security Engineer Intern | SEEDA SeeRem Inc.** | (Linux, Bash, Python, CLI) | CG, CA **Sep 2021 - Feb 2022**

- Enhanced security protocol with duo authentication features developed for local systems and for those on Microsoft Azure.
- Contributed to the multilayer security system through the development of proprietary encryption of meta-data in 2.03 release.
- Integrated physical access control points for the dev environment which reduced penetration testing score by 25%.

**Software Engineer Intern | Mortgage Automator** | (JavaScript, Python, SQL) | TO, CA **May 2021 - Sep 2021**

- Through client-side scripting gathered data for the investor and deployed models to reveal trends in revenue and loan terms.
- Built custom doc processes to parameterize the ACC filing system which were able to reduce doc delivery ETA by over 30%.
- Developed 2 new bridging modules in JavaScript to support code interactions between the back-end and front-end elements.

**Full Stack Developer Intern | EduShare Inc.** | (Node.js, Python, HTML, CSS) | WA, CA **Sep 2020 - Jan 2021**

- Pushed the survey rating from 3.5 to 3.8 and ensured a crash-free rate of 99.98% by fixing crucial bugs in the scheduling system.
- Developed 20+ new features to support live annotations, induce student engagement, and enhance content usability within the app.

**Back End Developer Intern | HoverHub Inc.** | (Node.js, JavaScript, Python, SQL) | TO, CA **Sep 2018 - Jan 2019**

- Enabled asynchronous connectivity between devices which reduced latency by over 30% after script repackaging.
- Refactored the Scanner SDK React Native library to support multi-vendor connections for up to 2 barcode scanners.

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**University of Waterloo, *Cheriton School of Computer Science, Bachelor of Mathematics*** **Sep 2019 – Dec 2023**

- Honor Roll & President's Scholarship of Distinction ($12,000) for admission average greater than 95%. UW CS World Rank: #25
- Algorithms, Data Structures, System Programs & Concurrency, Combinatorics, and Differential Equations. **Honor Roll | GPA: 3.89**

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***Machine Learning & Regression Analysis on AWS:*** - *https://github.com/JoexTitan/Regression-Analysis-AWS*

This data pipeline orchestrates a batch ETL process with Amazon EMR in order to provide a predictive estimate for the employee compensation range. The tech stack for the project is as follows: (Spark | Docker | Airflow | Scikit-Learn | S3 | EMR)

***Twitter Data Pipeline & Sentiment Analysis:*** - *https://github.com/JoexTitan/Social-Media-ETL-Pipeline*

The following data pipeline extracts twitter data in order to analyze the sentiment of the tweets and share them with the https://slack.com community. The tech stack for the project is as follows: (Pandas | Tweepy | MongoDB | PostgreSQL | Docker)