# Joe Youssouf

Windsor, Ontario, Canada

linkedin.com/in/joeyoussouf contact@joseppy.ca https://github.com/JYoussouf joseppy.ca

## Profile of Skills

**Programming Languages:** Python, SQL, PySpark, Bash, HTML/CSS, MATLAB & Simulink
**Frameworks/Packages:** Pandas, NumPy, Matplotlib, Scikit-learn, Django/DRF, Flask
**Data Engineering/MLOps Tools:** PostgreSQL, Dagster, MLFlow, DigitalOcean, Iceberg, Timescale
**Dev Environments and Tools**: Jupyter (Classic and Lab), VS Code, direnv, Redis, Docker
**Other:** Git, GitHub, Linux (Ubuntu, WSL2), MS Office Suite, Arduino/RPi

## Industry Experience

### Intermediate Data Scientist — Sept 2020 - Present

*Preteckt Inc.* — *Hamilton, Ontario*

**Company Objective:** Leverage years of time series vehicle data and machine learning models to deliver *human-in-the-loop* predictive maintenance alerts and repair plans for thousands of heavy-duty vehicles across North America.

**My Contributions:**

- Successfully and independently managed external relationships, performing consulting data science advising and analysis for larger partner companies, setting and meeting contracted project milestones along the way
- Independently designed and built multiple data ingest pipelines using Dagster to capture raw daily API data, perform transformations, and load into Apache Iceberg
- Developed a systematic exploratory data analysis (EDA) internal standard report for newer data scientists on our team, and personally performed thorough analyses for many disparate data sources using Pandas and SQL
- Contributed to preprocessing and training methods for our clustering anomaly detection models and deployed trained models to our MLFlow production database
- Proud to have mentored 3 co-op students and 2 entry-level data analysts and scientists as well as refactoring and maintaining our official data science onboarding and internal tooling repository

## Education

### B.A.Sc. - Honours Electrical Engineering w/ Co-op — Sept 2017 - Aug 2021

*University of Windsor* — *Windsor, Ontario*

- Cumulative GPA: 4.0/4.0
- Minor in Mathematics and Statistics
- Dean's Honour Roll - 2017-2021

## Extra-Curricular Experience

**WinSAT - Space & Aeronautics Team** **Sept 2018 - Feb 2020**
*University of Windsor* *Windsor, Ontario*

- Competed in the Canadian Satellite Design Challenge (CSDC) against 15+ top Canadian university teams to build a 3U Cube Satellite for Low Earth Orbit with the capability of transmitting photos of the Earth for a year-long mission
- Elected as leader for the Electrical Power Systems (EPS) and of the Command & Data Handling subsystem teams as a result of my dedication to the team, overtime hours, and strong communication skills
- Led our division to complete a series of solar panel designs, flight simulations, and oscilloscope testing documents with respect to the project Gantt Chart deadlines
- WinSAT achieved 1st place in the CSDC-5 Critical Design Review (CDR)!

**University of Windsor's EPICentre Makerspace** **Aug 2018 - Mar 2021**
*University of Windsor* *Windsor, Ontario*

- Designed, programmed, and assembled a 3D printed and laser-cut computer numerical control (CNC) machine with a small group of engineering students.
- Wrote an Arduino module and Mach3, a CNC controller software, to control independent x, y, and z motors in order to move a robotic drilling arm to specific locations
- Presented our finished product at the 2019 Windsor-Essex Mini Maker Faire along with over 30 other local entrepreneurs, inventors, and creators

## Adjacent Work Experience

**Electrical Engineering Intern** **Jan 2020 - May 2020**
*Windsor-Detroit Bridge Authority* *Windsor, Ontario*

- Prepared CAD models, produced data analysis reports, and shadowed the lead electrical engineer to prepare for the construction of the Gordie Howe International Bridge
- Modelled toll booth and lane assets for the development of a "digital twin" model of the bridge
- Independently conducted a Population Density and Local Urban Growth study to generate metrics for projected vehicle and electrical load
- Presented my models and analysis reports to subcontractors and government stakeholders during technical work group meetings in a consultant engineering environment, incorporating their feedback throughout

**Electrical Engineering Intern** **Apr 2019 - Sept 2019**
*ENWIN Utilities Ltd.* *Windsor, Ontario*

- Programmed and facilitated software updates for an industry specific pole tension analysis software, created support documentation to highlight my changes, and held presentations to train the entire engineering technician department
- Developed sweeping improvements to citywide power metric reports, including monthly power usage data trackers that were quickly adopted at all levels of the company
- Consistently acknowledged by my leaders for the "friendly and interpersonal" team environment I helped to create!

**Assistant Manager** **Mar 2016 - Aug 2021**
*Tim Hortons* *Windsor, Ontario*

- Promoted to a supervisor and assistant manager position within 3 months and 1.5 years respectively as a result of my committed and consistent professional work ethic and initiative
- Managed a diverse team of employees to accomplish top-of-the-line customer service in a fast-paced and challenging environment
- Presented bold and fresh ideas to local franchisees and owners with respect to work-flow management and team member efficiency that resulted in improved productivity and implementation across all local locations
- Organized and led multiple successful community-based fundraising and charity events such as our annual "Riverside Night Run for Mental Health Support" and "Tim Hortons Camp Day"

## Awards and Conference Recognition

Transit Research Board - Transit Data Challenge (Pending) **Jan 2024**
*Applied for the 2024 transit data challenge, pitching Preteckt's solution in Washington, D.C among 5 other industry finalists*

CUTA Conference Young Leaders Summit **Nov 2023**
*Selected as a delegate among hundreds of applicants to represent and pitch Preteckt among new and experienced Transit Leaders across North America*

Google Developers Group **Nov 2022 & 2023**
*Presented yearly to a crowd of 50-100 local developers and students about building a data-driven startup company as well as presenting a demo on taking raw data and transforming it into a clustering model*

Professional Engineers of Ontario **Foundation for Education Scholarship** **Apr 2019**
*Awarded to engineering students who have demonstrated an equal combination of high academic achievement and leadership through participation in professional affairs and extra-curricular activities*

**Windsor-Essex Chapter** - Professional Engineers of Ontario **Bursary** **Mar 2019**
*Awarded to engineering students who have demonstrated exceptional academic achievement*

**Tim Hortons Young Excellence Scholarship** **2017, 2018 & 2019**
*Awarded to exceptional students across Canada who have exceeded expectations in their academic studies and who have actively contributed to improving their community through Tim Hortons volunteer events*

**Electrozad Foundation Scholarship** **Dec 2018**
*Awarded to electrical engineering students in their second year who have achieved a minimum cumulative average grade of 95%*

**Dean's Renewable Entrance Scholarship** **Sept 2017 - Aug 2021**
*Awarded and renewed every term to students who maintain a cumulative average of 90% or greater in their coursework. A grade of 75% or lower in any single course would cancel the renewal of this award.*

**JANLA Scholarship Award** **June 2017**
*Awarded to a graduating student who has achieved a minimum cumulative average grade of 85% and who has demonstrated passion for their chosen post-secondary field of study through extra-curricular activities*

## Relevant Coursework and Professional Development

***Independent Coursework:***

- Machine Learning Specialization (Andrew Ng)
- Forecasting Principles and Practice
- Ubuntu CLI
- Django and DRF Tutorial
- StatQuest's Machine Learning Playlist
- Designing Data Intensive Applications
- SQLBolt
- Makefile Tutorial
- Flask Interactive Tutorial

***Personal Conference Attendance:***

- Open Data Science Conference 2023
- KDD 2022
- PyData 2020 and 2021 (Virtually)
- GDG Windsor-Essex 2022, 2023
- Emerging Tech in Automation 2022

***University of Windsor:***

- [MATH-126] Linear Algebra (96%)
- [MATH-140] Differential Calculus (94%)
- [MATH-141] Integral Calculus (92%)
- [MATH-215] Vector Calculus (92%)
- [MATH-216] Differential Equations (95%)
- [GE-85-225] Statistical Treatment of Experimental Data (92%)
- [STAT-2920] Probability and Statistical Inference (97%)
- [ELEC-2240] Signals and Systems (94%)
- [ELEC-2280] EM Fields - Physics IV (99%)
- [ELEC-2280] EM Waves - Physics V (98%)
- [COMP-2540] Data Structs & Algorithms (98%)
- [GENG-3130] Eng Economics (98%)
- [ELEC-4570] Digital Signal Processing (85%)
- [ELEC-4490] Sensor & Vision Systems (89%)