

Cobourg, Ontario
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Adele M. Hedrick, M.Sc

Skills

Programming Languages: Python (Pandas & PySpark), Golang, PHP, Node.js, Clojurescript, Angular

Cloud Platforms: AWS, GCP

DevOps: GitActions, Jenkins, Terraform, Docker, Datadog, Automated Unit Tests

Data Engineering: Apache Airflow, DBT, Pentaho, AWS Services (Step Functions, Glue, Lambda, Athena, SQS, SNS) GCP Services (Dataproc), Thingsboard

Relational Databases: DB2, SQLServer, PostgreSQL, Redshift, MySQL, SQLite, MariaDB, Google BigQuery

Visualization: D3, Plotly, Qlik

Data Modeling: Data Warehouse, Data Mart, OLTP, OLAP, Data Lake

Machine Learning: XGBoost, Forecasting, LLM, Prompt Engineering, Chat GPT

Experience

360insights

Head Data Science, Whitby, ON.

Jan 2021 – Present

Team Lead, Data Science.

Nov 2020 – Jul 2021

Data Science & Engineering Consultant.

Jul 2020 – Nov 2020

Data Scientist.

Jul 2018 – Nov 2019

Software Developer.

Jul 2017 – Jul 2018

- Awarded for facilitating a positive team culture providing psychological safety resulting in more innovation and a high performing team.
- Designed the Operational Data Store (OLTP) and kept alignment with the Analytic Data Store (OLAP) that was being designed by a colleague.
- Enabled actionable insights for multiple clients with rapidly developed Qlik dashboards.
- Generated ad-hoc reports, extracting data from multiple sources and formats, to investigate system behaviour, diagnose problems, and generate import files to correct data discrepancies.
- Built a generic data pipeline that would clean, conduct feature selection, parameter tuning, train an XGBoost model, predict and analyse results.
- Developed use case specific connector to extract data and generate over 300 features.
- Reduced manual risk analysis by 85%, leaving 15% of the claims to have the reviews augmented with information from the risk model to support the reviewer.
- Scaled the forecasting service by building a generic forecasting service on AWS, capable of generating hundreds of forecasts in parallel, reducing the time to generate these reports from +24 hours to less than 15 minutes.
- Developed a versatile utility enabling users to define data connections and analytics requirements via JSON, automating the generation of Excel spreadsheets and PowerPoint reports; includes a backend mechanism that dynamically constructs tailored star schema database tables to efficiently deliver the requested analytics.
- Created a CI/CD pipeline with GitActions to support the GitHub flow development workflow and deployment.
- Created a robust unit testing system for an AWS system that would mock out external services to support the tests being executed in an isolated continuous integration environment.

<i>Datalogy</i>	Data Science & Eng. Consultant, Toronto, ON. April 2024 – Present <ul style="list-style-type: none"> ○ Developing a prototype to demonstrate AI capabilities in extracting text and context from images, specifically targeting invoice processing.
<i>InvestDefy</i>	Data Science & Eng. Consultant, Toronto, ON. Mar 2023 – Jun 2023 <ul style="list-style-type: none"> ○ Optimized Airflow DAGs for enhanced generality and reusability, significantly reducing development time and accelerating insight generation. ○ Automated feature engineering and predictive modeling for cryptocurrency price trends.
<i>RealTech</i>	Data Scientist, Whitby, ON. Nov 2019 – Mar 2020 <ul style="list-style-type: none"> ○ Reduced turn around time of device calibration service by replacing a manual process with a pipeline that included querying an API. Supported engineering with RoHS compliance.
<i>IBM Canada</i>	Software Developer, Toronto, ON. Mar 2016 – May 2017 <ul style="list-style-type: none"> ○ Developed backend infrastructure for a learning management system (LMS), enhancing storage and organization of educational content. Led the creation of a data analytics-driven reporting system to improve course assessments and content.
Certifications	2024: Data Steward Foundation Certification, Reltio 2024: Test Lead Foundation Certification, Reltio 2023: Certified SAFe 6 Practitioner, Scaled Agile, Inc. 2020: Design Thinking Applied to AI and Machine Learning Workshop, TMLS 2018: Qlik Sense Business Analyst Qualification, Qlik 2018: Qlik Sense Data Architect Qualification, Qlik 2018: TDWI Advanced Data Modeling Techniques, TDWI
Education	M.Sc in Computer Science , Ontario Tech University, <i>GPA: 4.12.</i> 2017 B.Ed in Education , Ontario Tech University, <i>GPA: 4.0.</i> 2013 B.Sc in Computer Science , Ontario Tech University, <i>GPA: 3.54.</i> 2008 Adv. 3-year Diploma in Multimedia Design , Durham College. 2003
Publications	Modeling Transition and Mobility Patterns. 2018 Discusses the modeling of user transitions and mobility patterns without cloud services, preserving privacy. Hierarchical Temporal Mobility Analysis with Semantic Labeling. 2015 Focuses on deducing salient locations and mobility patterns from WiFi signals. Authoring Relational Queries on the Mobile Devices. 2012 Describes the design and implementation of a user interface for interacting with a relational database on mobile devices.
Projects	Generic Temporal Feature Generation. Developed for Google Cloud Provider and BigQuery. Utilizes DBT and PySpark to create temporal features for data analysis.