

# Louis Bourassa

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## PROFESSIONAL EXPERIENCE

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Jan. 2022 – Present

**Senior Data Scientist**, [Ticketmaster](#), Québec City, Québec

- Define and maintain code standards
- Data pipelines creation and maintenance (ETL)
- Exploratory data analysis
- Creation of observability tool for legacy models
- Develop and maintain infrastructure as code (AWS, Databricks, Kubernetes)
- Advise on data science best practices
- Develop CI pipeline and increase tests coverage

Technologies: Kubernetes, AWS Fargate, AWS Glue, AWS Athena, Kafka, Spring Boot (Java), Pulumi, Terraform (Infrastructure as code), Gitlab CI, Docker, MySQL, AWS S3, Looker, Databricks (Spark, MLflow, Delta lake, S3, SQL)

July 2020 – Déc. 2021

**Artificial Intelligence Developer II**, [Intact](#), Québec City, Québec

- Transform experimentation code made by data scientist to production code (create patterns to structure the data processing pipeline code, refactor code to make it more structured/reusable, teach good practices with pull requests review and presentations, develop functionalities, increase tests coverage, contribute to integration test, improve CI/CD pipeline, help organize deployments, etc.)
- Expose and maintain data (data processing) of an Elasticsearch database
- Develop and maintain web services
- Contribute to quality assurance with unit tests, integration test and stress tests
- Collaborate with tech lead, manager and architects to improve architecture
- Model review, statistical and data analysis

Technologies: Elasticsearch, Sanic, Gitlab CI, Helm, Kubernetes, Docker, AWS S3, scipy, sklearn,

SEPT 2019 – JULY 2020

**Data Scientist**, [Syntell](#), Québec City, Québec

- Create a system to put predictive models in production using Kubernetes/Docker which integrate to the existing system
- Automatisation of unit tests and archiving of models using Azure Pipelines
- Collaborating with subject-matter expert (in this case human resources expert) to identify needs and possibles solutions
- Create dashboards to present results and follow progress
- Statistical and data analysis
- Modeling using survival models and time series analysis

Technologies: Microsoft MS Server, Kubernetes, Docker, SQL, scipy, scikit-learn, Kedro

FEB 2019 – APRIL 2019

**Consultant in Artificial Intelligence**, Analytique Bourassa Inc., Québec City, Québec

- Create a predictive model for multivariate time series for autonomous train

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- Identify with the client possible improvements which the team could help tackle, help coordinate the effort of a small team and create the model
  - Create a tool to explore hyperparameter space using a genetic algorithm

Technologies: Zeppelin, Docker, Postgres, Pytorch

MARCH 2018 – DEC. 2018

**Research professional**, [Thalès](#), Québec City, Québec

- Create models using supervised and unsupervised approaches for time series and geospatial data for aircrafts
- Anomaly detection in time series
- Define and maintain code architecture

Technologies: Elasticsearch, Cassandra, Docker, Spark, scikit-learn

MAY 2017 – DEC. 2017

**Doctoral candidate**, Université Laval, Québec City, Québec

- Research award for internship in industry, [Mitacs](#)
- Excellence Award, [FORNT](#) (provincial government)

SEPT. 2013 – DEC. 2014

**Research assistant**, [Hydrogen Research Institute](#), Trois-Rivières, Québec

## SKILLS

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Databases: PostgreSQL, Cassandra, Microsoft SQL server, MongoDB, Elasticsearch, Snowflake, Delta Lake

Dashboard: Kibana, Grafana, PowerBI, Looker

Data science: pandas, scikit-learn, pytorch, Tensorflow, keras, Spark, Kedro, scipy, numpy

Development: Sanic (web framework), Gitlab CI/CD, Azure Pipelines, Kubernetes, Docker

Programming language: python (6 years), C++ (<1 year), Java (<1 year), Fortran (<1 year)

## EDUCATION

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2017

Université de Sherbrooke, Québec

M. Sc. Physics

Perseverance award granted by [Hydro-Québec](#)

2015

Université du Québec à Trois-Rivières, Québec

B. Sc. Physics

Excellence award granted by Élevateurs de Trois-Rivières

## VOLUNTEER WORK

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SEPT. 2015 – DEC 2016

**Administrator**, RECSUS (student association), Sherbrooke, Québec, Canada

OCT. 2015 – FEB. 2016

**Listener**, Secours Amitié Estrie, Sherbrooke, Québec, Canada