# NIKOLA KUZMIC

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#### **EDUCATION**

University of Toronto, Toronto, ON

Sep 2018

Master of Applied Science, 3.7/4.0 GPA

Relevant Courses: Introduction to Data Science & Analytics, Machine Learning, Cloud Computing

Ryerson University, Toronto, ON

Bachelor of Engineering, Mechanical Engineering, 4.1/4.3 GPA

Relevant courses: Digital Computation & Programming in C, Statistics, Linear Algebra, Numerical Analysis

**CORE SKILLS** 

Programming Languages: Python, JavaScript, C/C++

Machine Learning: Scikit-Learn, Pandas, TensorFlow, PyTorch, MLflow, NLP

Web Technologies: REST APIs (Flask, Django, FastAPI), HTML, CSS, Bootstrap, jQuery, Vue, Axios, JWT Cloud Technologies: AWS ECS, CloudFormation, Code Deploy, Lambda, API Gateway, Load Balancers,

CloudWatch, IAM, S3, Route 53, MySQL, PostgreSQL, RDS

Software / Tools: Git, Shell, CI/CD, Linux, Docker, Nginx, Postman, Webpack, Bokeh

#### PROFESSIONAL EXPERIENCE

### EnergyX Solutions Inc., Toronto, ON

Jan 2019 – Present

*Machine Learning Engineer* (June 2020 – Present)

- Designed and implemented highly scalable backend applications through the Python object-oriented architecture
- Architected and operationalized an MLOps framework on AWS using Github and CloudFormation
- Created detailed documentation pertaining to the API feature functionality and schema
- Implemented an API JWT authentication system and managed IAM control
- Led company cloud adoption by leveraging AWS resources such as ECS, RDS, Route 53, and S3
- Architected robust data pipelines between external data sources and MySQL/PostgreSQL databases
- Prototyped frontend features using Vue 2 and presented requirements to the engineering team

## Data Scientist (Jan 2019 – June 2020)

- Researched and implemented state-of-the-art ML techniques (Decision Trees, XGBoost, LightGBM, BERT)
- Collaborated with various stakeholders and teams in defining the business requirements inside highly complex technical contexts and created effective and reliable solutions in an Agile environment
- Performed numerous iterations of data cleaning, feature engineering, ML model development, hyperparameter tuning, error, and explainability analyses
- Implemented an anomaly-detection algorithm for predicting outlier records
- Championed adoption of Gitflow version control, PEP8 standards, and unit testing which reduced new ML model feature release-time by more than 90% and significantly improved the reliability of the model predictions
- Performed hypothesis testing in assessing the model performance against industry standards
- Maintained client relationships and clearly communicated solution capabilities in verbal and written form

## IBMT Laboratory, University of Toronto

Sep 2016 – Sep 2018

Mathematical Modeller

- Implemented open-source computational biology tools through Python object-oriented frameworks and Docker to simulate 3D blood-vessel growth in various tumour environments
- Coded an in-house MATLAB simulator, with mathematical models in the back-end, to enable researchers to identify optimal cell-culture experiment conditions and microfluidic device configurations

## **LEADERSHIP EXPERIENCE**

### Medium Writer (link)

• Sharing knowledge and best practices regarding ML system design, implementation, and deployment

### **Computational Science Instructor**

• Created and ran 2 one-week enrichment courses for high school students and led a team of 8 counsellors

#### **CERTIFICATIONS**

• AWS Certified Cloud Practioner (<u>link</u>): Certificate no. Y340PZNJLJE11B9K

2016