NIKOLA KUZMIC

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SKILL HIGHLIGHTS

- **Data Science/Machine Learning:** Python, Scikit-Learn, Bokeh, TensorFlow, Amazon SageMaker
- **Deployment:** Flask, Docker, Git, MySQL, Linux, AWS, Google Cloud
- **Front-end:** HTML, CSS, JavaScript, Bootstrap

EDUCATION

Master of Applied Science, Mechanical Engineering, University of Toronto 2016 – 2018

- Honours: NSERC – Canada Graduate Scholarship, MASc – Entrance Award, GPA: 3.7/4.0
- Relevant Coursework: Introduction to Data Science and Analytics, Machine Learning

Bachelor of Engineering, Mechanical Engineering, Ryerson University 2012 – 2016

- Honours: The Canadian Society for Mechanical Engineering (CSME) Gold Medal, Alumni Award, GPA: 4.1/4.3
- Relevant Coursework: Engineering Economics, Statistics, Reliability

PROFESSIONAL EXPERIENCE

Data Scientist, EnergyX Solutions Inc., Toronto Jan. 2019 - Present

Built end-to-end ML pipelines capable of recommending relevant house renovations and estimating associated energy savings for homeowners across Canada and the United States as an alternative to traditional in-person energy audits:

- Trained an ML model to predict house consumptions based on past on-site energy audits and synthetically generated data
- Implemented specialized regression models to infer technical features from simple user inputs
- Deployed models into production on AWS using Flask
- Utilized Gitflow in pipeline version control
- Performed ETL on open-source data and leveraged it to target high-value customers
- Created visualization dashboards of regional energy savings across Canada using Bokeh
- Performed SQL queries in retrieving customer data.

Mathematical Modeller / Graduate Research Assistant, IBMT Laboratory, University of Toronto 2016 – 2018

- Developed and implemented mathematical models of blood vessel growth in Python.
- Successfully modelled endothelial cell behaviour under chemical stimuli using differential equations.

Computational Science Instructor, The Da Vinci Engineering Enrichment Program, University of Toronto 2017 – 2018

- Led a team of 6 undergraduate students in developing two computational science courses.
- Demonstrated standard machine learning models used in cancer research.

Python Programming Teaching Assistant, University of Toronto 2017 – 2018

- Delivered tutorials and assisted students with the programming assignments in Introduction to Programming (APS 106) and Applied Mathematics (MAT 234, MAT 292, MIE 563) courses.

JOURNAL PUBLICATIONS

- **Kuzmic, N.**, Law, Y. L. E., & Dworkin, S. B. (2016). Numerical heat transfer comparison study of hybrid and non-hybrid ground source heat pump systems. *Applied Energy*, 165, 919–929. http://doi.org/10.1016/j.apenergy.2015.12.122
- **Kuzmic, N.**, Moore, T. A., Devadas, D., & Young, E. W. K. (2018). Modelling of endothelial cell migration and angiogenesis in microfluidic cell culture systems. Submitted to *Biomechanics and Modeling in Mechanobiology*. (In revision)