

Kyle Lukaszek

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Education

University of Guelph

Honours Bachelor of Computing, Major in Computer Science, Minor in Math
Completed Major in April 2024, Completing Minor ~2025

Guelph, ON, Canada

Sept 2020-Dec 2025 (Expected)

- **90% Average Over The Last 4 Terms, Most Recent Dean's List: April 2024**
- Achieved **92% in CIS*4780 Computational Intelligence**. For our final assignment, a partner and I **improved the performance** of existing 3D object classification algorithms using CUDA and Python and then wrote an IEEE conference paper that details our findings and methodology.
 - github.com/klukaszek/3D-Classification
- Achieved **100% in CIS*4820 Game Programming**. The final assignment was creating a game using Unity. I made a 2.5D pixel graphic arena fighter that I'm proud of given the time constraint.
 - github.com/klukaszek/CIS4820-Sprite-Fight
- Achieved **100% in CIS*3210 Computer Networking**. Learned extensively about the networking stack, and wrote a TCP remote file transfer command-line tool using C.
 - github.com/klukaszek/C-Socket-File-Transfer-3210
- Achieved **89% in CIS*3050 Systems Programming**. Learned **POSIX systems programming practices**, and higher-level operating systems concepts. Coursework comprised of BASH and C.
- Achieved **93% in CIS*3760 Software Engineering**. Maintained a full-stack sentiment analysis project with a scrum practicing team. Acted as the primary maintainer of **Gitlabs CI/CD**, **Docker** container management, and **Kubernetes** deployments.
 - github.com/klukaszek/CIS3760-Graphex-Project

Skills

Natural Languages: English, French (**DELF B2 Certified**)

Programming Languages: C/C++, Python, R, C#, TypeScript, JavaScript, Java, OpenCL, CUDA

Frameworks/Libs: React, Svelte, Flask, OpenGL, WebGL*, PyTorch, TensorFlow, SciKit, NumPy, Pandas

Developer Tools: Git, NPM, Bun, GitLabs CI/CD, Docker, Kubernetes, Unity

Currently Reading: "Real-Time Rendering 4th ed.", "Projective Geometric Algebra Illuminated"

*Currently learning WebGPU through working on a Physics sim in C + WASM

Experience

University of Guelph

Modelling Human Perception of Colour Based on Ambient Illumination

January 2024-Present

Guelph, Ontario

Working as a full-time research assistant supervised by Dr. Denis Nikitenko.

- Our goal is to evaluate the color accuracy of mobile displays under various ambient settings. We will then examine the effects of ambient lighting to create a tool that lets developers better visualize what their mobileapps might look like in different lighting environments.
- We are evaluating the color accuracy on mobile displays using a spectroradiometer.
- I am currently writing an FTDI driver for the spectroradiometer so that it can be used on UNIX systems instead of just Windows.
- **Our initial paper was accepted for the Graphics Interface 2024 conference in Halifax.**

University of Guelph

Detection and Prediction of Hate Speech on Social Media Using Machine Learning

May 2023-September 2023

Guelph, Ontario

Worked as a full-time Undergraduate Research Assistant supervised by Dr. Fattane Zarinkalam and Ph.D candidate Hadiseh Moradisani.

- Collaborated on a Big Data/IR machine learning project with Toronto Metropolitan University.
- Utilized Python and R libraries such as Google Causal Impact, Huggingface, and sci-kit-learn to develop and train various statistical models to predict hate speech on Twitter.
- Since we were working with a large amount of Twitter data, it was important to try and parallelize as much of my code as possible due to hardware constraints on our work server.
- Maintained well-documented notes for all code written throughout the project.
- Became more interested in the field of machine learning which led me to take the 4th year Computational Intelligence course after completing my work term.

References

Dr. Denis Nikitenko: PhD in Computer Science / Professor @ UoG

- **Email:** dnikiten@uoguelph.ca

Dr. Fattane Zarrinkalam: PhD in Engineering / Professor @ UoG

- **Email:** fzarrink@uoguelph.ca

Hadiseh Moradisani: Computer Engineering PhD Candidate @ UoG

- **Email:** hmoradis@uoguelph.ca