Stefan de Lasa

destefy | stefandelasa | stefan.delasa@gmail.com | 647-920-8916
Citizenship: Canadian & American | Born: December 3rd 2002

Education

University of Toronto, BASc - Computer Engineering 2020-2025
Seasonal GPA: 4.0 / 4.0, Cumulative GPA: 3.86 / 4.0 (Dean's Honour List) (4 years + Co-op year)

Work Experience

Software Development Intern, *CentML,* Toronto, ON **Sep 2023 - Aug 2024**

CentML develops tools to make machine learning (ML) deployments more affordable and efficient.

- Sole contributor to ML model **remote compilation** project, optimizing model deployments.
- Enabled developer workflows with a local compilation server. See here:
- Designed ML model compilation caching system, to reduce costs and improve user experience.
- Developed a method to consistently hash ML models, including **LLMs** and **CNNs**.

Undergraduate Research Student, *James Elder, York University,* Toronto, ON **May - Aug 2023**

The Elder Lab is using **image semantics** to improve computer vision monocular **depth estimation**.

- Formulated methods to apply Elder's model to enhance existing ML depth estimation solutions.
- Demonstrated ∼**20%** accuracy improvement over previous depth estimation models.
- Awarded **Student Choice Best Presentation** at the Lassonde Undergraduate Research Conference.

Software Engineer Intern, *PointClickCare (PCC),* Toronto, ON **May - Aug 2022**

PCC creates healthcare software to assist vulnerable populations with out-of-hospital care.

- Wrote front-end code to ease the editing of patient screening templates.
- Extracted user metrics for PCC's Pendo analytics and workflow improvements system.

Data Management Intern, *IESO,* Toronto, ON **Jun - Aug 2021**

The IESO gathers and monitors electrical data from industrial customers throughout Ontario.

- Spearheaded **machine learning** project for anomaly detection, using IESO's historical datasets.
- Performed in-depth review of Meter Service Provider data, for meter billing report correctness.

Extra Curriculars

Planning Team Member, *aUtoronto, Self-Driving Car Team,* Toronto, ON **Sep 2023 - May 2024**

The aUToronto planning team develops navigation algorithms for autonomous vehicles.

- Created method to find the fastest route to the nearest empty parking spot.
- Proposed and integrated a technique to reduce map density, improving planning performance >**20%**.

Electrical Team Member, *UTSM, Supermileage Team*, Toronto, ON **Nov 2021 - May 2022**

UTSM is a student team dedicated to designing and building a highly fuel-efficient vehicle.

- Designed car turning indicators and windshield wipers.

Awards

Lassonde Undergraduate Research Award (LURA) ($10,000 CAD) 2023
Student Choice Best Presentation at the Lassonde Undergraduate Research Conference 2023
Dean's List Scholar (UofT) 2020-2023
UofT Engineering Entrance Scholarship ($2,000 CAD) 2020

Conferences

Lassonde Undergraduate Research Conference, *York University*, Toronto, ON **Aug 2024**

- Oral Presentation: "Improving Deep Learning Depth Estimation Using Image Semantics and Geometry".
- Recieved the **Student Choice Best Presentation** award.

Selected Projects

3D Gaussian Splatting for Snapdragon (Qualcomm) Hardware **Sep 2024 - Present**

- Implementing 3D Gaussian Splatting renderer for devices powered by Snapdragon Adreno **GPUs**.

Programmable Compass **April 2023**

- Used a GPS module to receive location data using USART communication and Direct Memory Access.
- Communicated via I2C with a magnetonomer to determine my compass' orientation.
- Used Pulse-Width-Modulation to display the direction and distance on on a LED ring.

OS161 (Operating System) **Jan 2023 - April 2023**

- Implemented **memory management**, page reclamation, demand paging, and page swapping with disk.
- Created core system calls for user programs including waitpid, fork, and exec.
- Added key synchronization primitives such as locks and condition variables.

Radio Transceiver **Jan - Apr 2022**

- Designed limiter, filter, mixer, and amplifier circuits for a radio receiver (Altium, Multisim).
- Demonstrated successful integration of our subcircuits into a functioning radio transceiver.
- Communicated design rationale to technical and non-technical audiences through presentations.

Skills

Programming:	Python, PyTorch, C, C++, MATLAB, JavaScript, TypeScript, React, ARM Assembly
Dev Tools:	Git, VSCode, Docker, AWS, K8S, SQL, Jenkins
Communication:	LaTeX, Google Workspace, MS Office, Outlook

Languages

English: Native Proficiency
French: Native Proficiency
Polish: Beginner

Interests / Hobbies

Strategy games, Table tennis, Crossword puzzles, Escape rooms.

References

Available upon request.