Stefan de Lasa

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EDUCATION

University of Toronto, Bachelor of Applied Science & Engineering, Computer Eng., 2020-2025
Seasonal GPA: 4.0/4.0, Cummulative GPA: 3.81/4.0 (Dean's Honour List)

Relevant Courses: Algorithms & Data Structures (ECE345), Matrix Algebra & Optimization (ECE367), Computer Networks (ECE361), Control Systems (ECE311), AI Fundamentals (APS360), Operating Systems (ECE344).

SKILLS

Programming:	Python, C, C++, MATLAB, Javascript, Typescript, React, ARM Assembly
Dev Tools:	Git, VSCode, Docker, AWS, PostgreSQL, Conda, Jenkins, Cypress
Hardware Design:	Verilog, Multisim, ModelSim, Altium, Typhoon

WORK EXPERIENCE

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

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

- Used **React** and **Typescript** in **Docker** environments to ease editing of patient screening templates. Several internal users mentioned improved usability from my work.
- Migrated the US "Care Insights" application to Canadian markets. Configured a back-end **Spring Boot** controller to determine session permissions via API calls.
- Extracted user metrics and sent them to PCC's Pendo system to collect analytics for workflow improvements.
- Wrote service and unit level tests in **Cypress** and **Kotlin** to ensure UI and data pipeline integrity.

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

As the Crown corporation responsible for operating/directing the electricity market in Ontario, the Independent Electricity System Operator (IESO) gathers and monitors data from industrial customers throughout the province.

- Prepared presentation to highlight uses of **machine learning** to improve existing processes.
- Recommended **supervised learning** for anomaly detection, using IESO's historical datasets.
- Worked with peers to review Meter Service Provider data, for meter billing report correctness.

Research Assistant, *York University*, Toronto, ON   **Jul - Aug 2018**

Permeable pavements are a promising method to control stormwater run-off. Dr. Usman Khan's group is investigating different **Machine Learning (ML) techniques** to categorize different paved surfaces.

- Conducted experiments to measure important properties of different paved surfaces.
- Analyzed and inputting results into a database for subsequent training by a ML model.

Selected Projects

Messaging App, *Computer Networks (ECE361)*   **Nov - Dec 2022** 🔗

Implemented **multi-threaded** client and server applications using **TCP sockets** in **C**.

- Users could create and join sessions, broadcasting messages to other users.
- Features included private messaging, listing active users, and basic password-protected login.

Dr. Mario game, *Computer Organization (ECE243)*   **Jan - Apr 2022** 🔗

Recreated the popular Dr. Mario NES game on a **DE1-SoC** board using **C** and the CPUlator simulator. Dr. Mario is a tetris-like game where you control falling pills to eliminate viruses.

- Designed algorithms to control inputs, collisions, and game behavior.
- Detected **interrupts** from a keyboard and timers.

Radio Transceiver, *Hardware Design (ECE295)*   **Jan - Apr 2022** 🔗

Designed, built, and tested 2 radio transceiver components as part of a 3 student team.

- Used **Altium** and **Multisim** to design limiter, filter, mixer, and amplifier receiver circuits.
- Demonstrated successful integration of our subcircuits into a functioning radio receiver.
- Communicated design rationale to technical/non-technical audiences through presentations.

Image Compression with SVD, *Linear Algebra (MAT188)*   **Nov - Dec 2020** 🔗

Explored use of **singular value decomposition** for image compression.

Extra Curricular

University of Toronto Supermileage Team (UTSM)   **Nov 2021 - May 2021**

The UTSM club is a student team dedicated to designing and building a highly fuel-efficient vehicle. I contributed to the electrical system design, including the turning indicators and windshield wipers.

Other

Citizenship: Canadian and American
Languages: English (Native Proficiency), French (Native Proficiency), Polish (Beginner)