

# Christina Pizzonia

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## EXPERIENCE

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### Summer Research Student

May 2022 - Aug 2022

Passeport Lab

*Toronto, ON*

- Processed stormwater samples via density separation and organic digestion (in accordance with lab SOPs) and identified microplastics via FTIR spectroscopy to provide data for publication
- Analyzed microplastic content data in Microsoft Excel to determine sources of error & improve accuracy of counted samples by 50%
- Performed a literature review (15 papers) on organic contaminant [extraction methods](#) and presented my findings to 2 lab teams at the university.

### Research Assistant

May 2021 - Nov 2021

SickKids Hospital

*Toronto, ON*

- Created and presented [figures](#) using BioRender to illustrate the mechanisms behind current advances in cancer immunotherapy to incoming undergraduates

### Tutor

Mar 2021 - Present

[Self-Employed](#)

*Toronto, ON*

- Have improved student scores by 25% in calculus, advanced functions and chemistry

## PROJECTS

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**Autonomous Robot** [[GitHub](#)]: Designed and programmed an autonomous, line-following robot using Fusion360 and Arduino to navigate a track using both bang-bang and PID control algorithms.

**Sauna Redesign** [[Slides](#)]: Designed a fully off-grid sauna in Rhino/Photoshop for Concord Investments' President David Delaney; Milestones followed a waterfall methodology and were tracked in Microsoft Project.

**Manhattan Plots** [[Results](#)]: Performed a GWAS to determine single nucleotide polymorphisms influencing ERAP-2 expression in Utah residents with EU ancestry and Yoruba individuals from Nigeria in R with data from the 1000 Genomes project.

## SKILLS

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Languages

C/C++, Arduino, Python, MATLAB, R,  $\LaTeX$

Frameworks

TensorFlow

PCB Design & CAD

Verilog, Quartus/ModelSim, LTSpice, AutoCAD/Fusion360

## EDUCATION

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**Bachelor of Applied Science, Computer Engineering**, University of Toronto

2022 - 2027

- Dean's Honours List (cGPA: 3.97/4.00)
- Trustworthy Machine Intelligence, ECE Mentorship Program

**Summer Abroad**, University of Siena

Summer 2023

- Summer Abroad outreach coordinator
- [Website](#) documenting the experience in progress

**Ontario Secondary School Diploma**, University of Toronto Schools

2015 - 2021

- Governor General's [Medal](#) (highest cumulative average)