📞 +1 647 569 7825
✉️ madrid.laura@outlook.com

in linkedin.com/in/laura-madrid/
⌨ github.com/Laura05010
🌐 www.lauramadrid.ca

Laura Madrid
AI Researcher & Software Engineer
Seeking technical research and engineering roles.

EDUCATION

University of Toronto — Sep 2019 − Jun 2024
Honours Bachelor of Science in Computer Science - Entrance Scholarship — *Mississauga, Ontario*
- **Teaching Assistant**: Computer Programming, Computer Science, Theory of Computation, Computer Organization, Databases, Ethics in Computer Science

EXPERIENCE

Experiential Education Unit - University of Toronto — Sept 2024 − Present
Graduate Research Assistant- UTM Co-op Internshhip Program (UTMCIP) — *Mississauga, Ontario*
- Support the launch of the UTMCIP by providing disciplinary expertise and assisting in the delivery and evaluation of Work-Readiness Modules.

MEDCVR Lab - University of Toronto — Jan 2024 − Present
Research Assistant- Medical Computer Vision & Robotics Lab — *Mississauga, Ontario*
- Developing an internal application to analyze vocal fold movement in laryngoscopies using **OpenCV** and **SciPy.**
- Enabled automatic identification of larynx and trachea landmarks using HSV color masks a **DeepLabCut** model for landmark annotation.

AIRY3D - Core Team — May 2024 − Nov 2024
Computer Vision Software Engineering Intern — *Montreal, Quebec*
- Researched and implemented SOTA outlier removal methods for captured point clouds in **C++**.
- Developed an ISP (Image Signalling Processor) pipeline in **C++** using **OpenCV**.

Zillow — May 2023 − Aug 2023
Software Development Engineering Intern - Rich Media Experiences (RMX) Team — *Remote*
- Integrated Apple's **RoomPlan API** into the AR room capture app, streamlining a multi-step manual process into a single iPhone scan.
- Implemented **ARSession relocalization**, and 2D/3D floor plan generators with furniture.
- Delivered a comprehensive report to the RMX team, incorporating key WWDC23 updates for ongoing initiatives.

Zillow — Jun 2022 − Aug 2022
Zillow Engineering & Leadership (ZEAL) intern — *Remote*
- Completed rotational projects with the Rental Revenue Platform (RRP), Premier Agent iOS Mobile (PA iOS), and Constellation Design System (CDS) teams, and participated in Zillow's annual Hackweek competition.
- *RRP Team:* Enhanced data handling efficiency by streamlining database access, using a Java Job Trigger to export **Parquet-format tables** to the **AWS Datalake**.
- *PA IOS Team:* Developed a contact details page for Real Estate agents using **UIKit** and **JSON** data parsing.
- *Hack-week Competition:* Team won **2nd** place in the Product Features & Business Ideas category, for which I modified **USDX** models using the **RoomPlan API**.
- *CDS Team:* Redesigned the Constellation documentation platform and improved navigation via an upgraded search UI with **React, GraphQL** and Styled Components.

Tiary Inc. — Jun 2021 − Aug 2021
Software Development Intern — *Toronto, Ontario*
- Revamped web pages (Blog, FAQ, Checkout, Order Tracking) using **React** and developed Tiary Studios' info site with **JavaScript**, **Gatsby**, and **GraphQL**, improving site functionality and user experience.

Microsoft — Jul 2019 − Aug 2019
Intern — *Mississauga, Ontario*
- Developed a **PowerApps** Inventory Management Platform with a team of 5, reducing marketing material request time and presenting it at Microsoft's National Annual General Meeting.

PROJECTS

Indoor Rock-Climbing Assistance Tool (IRCAT) ⌨ ↗ | *Python, OpenCV, YOLOv8* — Sep 2023 − Present
- Won a **$1500 research** grant and presented project at the 2024 UofT Summer Undergraduate Research Fair.

Brain Tumor Classification Model ⌨ ↗ | *Python, TensorFlow* — Sep 2023 − Dec 2023
- Won **1st place** at the UTMSU Undergraduate Research Symposium.

SKILLS & COURSES

Languages: Spanish (Native), English (Fluent), French (DELF B1), Italian (Beginner)
Developer Tools: Python, C++, Swift, Deeplabcut, OpenCV, PyTorch, TensorFlow, YOLO, RoomPlan, React, Gatsby, Firebase, AWS, HTML, CSS, PostgreSQL, Figma
Relevant Courses: Image Understanding, Machine Learning, Neural Networks and Deep Learning, Medical Robotics, Mobile Robotics, Ethics for Computer Scientists.