GAL COHEN

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Engineering student specializing in Robotics & AI with a minor in Business at the University of Toronto. Proficient in Robotics, Computer Vision, Machine Learning, web development, and project management. Adept at creating efficient solutions. Seeking a Robotics-focused position for up to 16 months starting from May 2024.

SKILLS

- Robotics
- Machine Learning
- MATLAB
- Git
- Computer Vision
- AutoCAD
- Web Development
- Project Management
- Teamwork

LANGUAGES

- C++
- C
- Python
- JavaScript

LIBRARIES & FRAMEWORKS

- OpenCV
- PyTorch
- ROS
- SciPy
- NumPy
- Node.js

EXPERIENCE

SOFTWARE ENGINEER INTERN SWAP COMMERCE • MAY – SEP 2023

- Designed and developed an enterprise-grade administrative dashboard at Swap Commerce, utilizing Flutter, Dart, and Firebase to ensure optimal performance while establishing secure connections to the company's codebase.
- Led an optimization initiative that helped reach the goal of $1 million in revenue elevating user experiences and streamlining workflows.
- Championed efficiency and stability through meticulous refactoring of critical application components, reinforced by end-to-end unit testing.
- Collaborated closely with the technical team to implement REST APIs, facilitating communication between frontend and backend systems.
- Successfully integrated platform services with 40+ prominent businesses, including recognized brands like Sirplus and Aspiga.

LANE DETECTION SOFTWARE ENGINEER GM-SAE AUTODRIVE CHALLENGE / AUTORONTO UOFT • SEP 2022 – AUG 2023

- Developed and optimized a deep neural network utilizing supervised and self-supervised learning with OpenCV2 and PyTorch to detect driving lanes and stopping lines, which enabled the team to win 6 consecutive years in Year 2 of the AutoDrive Challenge II.
- Implemented classical approaches to lane detection and computer vision using C++, achieving an accuracy rate of 98% on challenging datasets.

PROJECTS

GARBAGE GOPHER JAN – SEP 2023

- Developed an autonomous garbage bin robot using ROS on Nvidia Jetson Nano with C++, utilizing ultrasonic depth sensor and camera for computer vision, machine learning models and monocular depth estimation techniques.
- Utilized ultrasonic depth sensors and cameras for computer vision.
- Integrated deep learning algorithms for object detection, and OpenCV to optimize navigation pathways and accuracy of object recognition.

SELF-SUPERVISED DATA LABELING ML AUG 2022

- Implemented self-supervised data labeling ML models based on VGG16 and ResNet152.
- Achieved over 99% accuracy for the LISA dataset consisting of 100,000 photos.

ESC102 CAPSTONE JAN 2022 - APR 2022

- Engaged in an intensive engineering design course culminating in a group project showcasing the engineering design process.
- Spearheaded the development, design, and coding of a robotic hand with a primary objective of facilitating precise stick maneuverability for hockey players with disabilities via a joystick interface.

EDUCATION

BASC IN ENGINEERING SCIENCE + PEY CO-OP

University of Toronto

Sep 2021 - Apr 2025

- Expected Major: Robotics & AI + Minor in Business
- Cumulative GPA: 3.73
- Distinguished by the Engineering Society: Recipient of the prestigious Centennial Award (Apr 2022), recognizing commitment and dedication through active participation in extracurricular activities.
- Dean's Honours List: Recognized twice in a row for academic excellence, earning a place on the Dean's Honours List at the University of Toronto.
- Top Performer: Achieved a perfect grade of 100 in the course ESC180 (Data Structures and Python), showcasing exceptional aptitude and understanding.