Gal Cohen

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OBJECTIVE

Able to work May 2024 up to 16 months.

EDUCATION

University of Toronto
BASc in Engineering Science + PEY Co-op
Expected Major: Robotics & AI + Minor in Business
Sep 2021 - Apr 2025
Cumulative GPA: 3.73

KEY SKILLS

Technology Development
Project Management
Teamwork
AutoCAD
Git
MATLAB

Languages

C++
Python
C#
Java
Assembly
C
System-Verilog

Libraries & Frameworks

TensorFlow
OpenCV
SciPy
ROS
PyTorch
Matplotlib
NumPy

EXPERIENCE

Full Stack Software Developer • Swap Commerce • May – Sep 2023

• Designed and developed internal enterprise administrative dashboard using Flutter and Dart, ensuring efficient performance with secure connections to company's codebase.
• Led the optimization initiative, refactoring key components of the application to enhance efficiency and stability while implementing end-to-end unit testing.
• Collaborated with the tech team to create REST APIs, enabling smooth communication between the frontend and backend systems.
• Integrated our platform services for 40+ well known businesses like Sirplus and Aspiga.

Lane Detection Software Engineer • GM-SAE AutoDrive Challenge / aUToronto UofT • Sep 2022

• 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

GarbageGopher • Jan 2023

• Developed autonomous garbage bin robot that navigates to anywhere in the house with no human intervention, utilizing ultrasonic depth sensor and camera for computer vision, machine learning models and monocular depth estimation techniques.
• Used ROS on Nvidia Jetson Nano with C++ to ensure system reliability & performance.
• Assembled hardware: sensors, actuators, camera etc., enabling seamless robotic operation.
• Utilized 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 two self-supervised data labeling ML models based on VGG16 and ResNet152 with multi-GPU training and automated hyperparameter tuning to enhance accuracy and optimize performance.

• The models successfully classified traffic light images with an accuracy of over 99% for the LISA dataset consisting of 100,000 photos, as well as 94% and 98% accuracy respectively for the MIT dataset which was never trained on.

ESC102 Capstone • Jan 2022 - Apr 2022

• Completed an engineering design course, participating in a group project to demonstrate the process behind engineering design.

• Developed, designed and coded a robotic hand with the goal of enabling hockey players with disabilities to maneuver the hockey stick easily and precisely using a joystick.

Blackjack DDQN • Feb 2021

• Developed a Deep Reinforcement Learning model with Double Q-learning for a Blackjack game environment using TensorFlow and Python, with hyperparameter tuning.

AWARDS & CERTIFICATIONS

• Achieved a perfect grade of 100 in the course ESC180 (Data Structures and Python).