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Dean Van Heukelom

Software Engineer

I develop effective solutions to complex, open-ended problems in an agile environment

Work Experience

Axcessiom — Machine Learning Developer

Oct 2020 – Present

Part time development on tools and deep learning pipelines for facial recognition software to improve driver accessibility

Roboteurs — UE4/C++ Autonomous Driving Intern

May 2020 - Aug 2020

Designed a distributed simulation from the ground up to provide a testing platform for autonomous driving; provided implementations for vehicle sensors including GPS, vision and assisted in lidar point cloud

Bombardier — Database Development Intern

May 2019 – Apr 2020

Full stack development on a complex internal webapp; designed and normalized database schemas to effectively store millions of aircraft engineering records; assisted in migrating these systems into production

Projects

McMaster AI Team — Autonomous Vehicle Simulation

Oct 2020 – Present

Chosen to represent the university to develop a segmentation pipeline for perception of a simulated vehicle

Genre Classification

Oct 2020

A self-developed application of a convolutional neural network used to predict the genre of frequency domain transformed audio samples from the GTZAN dataset in TensorFlow

YoloV3 Implementation from Scratch

Aug 2020 - Sep 2020

A complete implementation of the you-only-look-once object detector from scratch using Torch; provided image preprocessing and prediction postprocessing techniques including non-max suppression, IOU

Skills

Programming	Data Science	Other Tools
C++	TensorFlow 2	Git
Python	Torch	Unreal Engine 4
C	NumPy	SQL
PHP	Pandas	Html/CSS
JavaScript	Scikit - Learn	Scrum
React	Eigen	Zenhub

Education

McMaster University — BEng, Software Engineering Management

Sep 2016 – Apr 2022

Consistent 3.6 GPA every year of study in software and mechatronics engineering courses, with minor in business. Ranked first place in software engineering – comp sci class wide competition for lowest runtime of a Mastermind solution