

Hugo Siqueira Gomes

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EDUCATION AND HONORS

M.Sc. in Electrical and Computer Engineering, Machine Learning

Quebec, Canada | Dec 2020

LAVAL UNIVERSITY

Thesis: Meta Learning For Population-Based Algorithms in Black-Box Optimization.

Fellowships: Institute Intelligence and Data(IID), and Mitacs Accelerate Fellowship.

Relevant Coursework: Deep Learning, Deep Reinforcement Learning, and Statistical Learning Theory.

B.Sc. in Computer Science

Rio de Janeiro, Brazil | Dec 2017

FEDERAL UNIVERSITY OF RIO DE JANEIRO

Thesis: Towards Deep Q-Caching

Fellowships: National Council of Scientific Researches Scholarship, and Institutional Scientific Initiation Scholarship

Teacher Assistant (TA): Data Structures and Algorithms, and Reinforcement Learning

WORK EXPERIENCE

LMI TECHNOLOGIES | VISION SOFTWARE ENGINEER

Vancouver, Canada | July 2022 – Currently

- Development of 2D and 3D AI tools in a vision software for inline measurement and inspection solutions.
- Development of smart camera projects with 2D/3D tools and calibration methods.
- Designed and deployed a real-time Anomaly Detection pipeline, leveraging deep learning to streamline workflow for labeling, training, and testing models.
- Ported and optimized vision tools pipeline to a vision software of 3D smart sensors, using C, C++, and Python.
- Developed GoAIK module, enabling integration between with GoPXL and Cognex, a leading machine vision software, improving data accuracy and processing time.
- **Technologies:** C, C++, Python, Deep Learning, Anomaly Detection, Computer Vision, Machine Learning.

NEXERA ROBOTICS | MACHINE LEARNING/ROBOTICS ENGINEER

Vancouver, Canada | Oct 2021 – July 2022

- Implemented a pick and place robotic solution using Universal Robots and Realsense/Kinect/Ensenso cameras.
- Implemented a computer vision pipeline (data labeling for 3D segmentation, training and evaluating model) for point cloud classification using PointCNN.
- Implemented a production-level QT desktop application for robotic tool.
- **Technologies:** Reinforcement learning, Open3D, Pytorch, Universal Robots, Computer Vision.

SUPERUBER | COMPUTER VISION ENGINEER (REMOTE)

Vancouver, Canada | Apr 2021 – Oct 2021

- Implemented hand tracking system to work in low-light conditions using multiples RealSense cameras.
- Implemented pose estimation system and OSC server in Unity Engine.
- **Technologies:** Machine learning, Computer Vision, Unity Engine, RealSense, OSC, Python, and C#.

DEEPER SYSTEM | JUNIOR MACHINE LEARNING ENGINEER (REMOTE)

Nevada, USA | Nov 2017 – May 2018

- Implemented a manageable infrastructure for image processing in cloud servers reducing process time by 30%.
- Automatized time-consuming tasks (10TB training data for annotation) using SOTA deep learning methods.
- Presented key findings for end customers to the team leader and wrote an executive report.
- **Technologies:** Deep Learning, Computer Vision, AWS, Docker, and Python.

GENERAL ELECTRIC | SOFTWARE ENGINEER INTERN

Rio de Janeiro, Brazil | Nov 2016 – Nov 2017

- Deployed 100+ wearable applications that gather training data and send it to docker containers.
- Processed 1TB of previously inaccessible data for a Human Activity Recognition system, improving prediction accuracy by 50% and speed by 400% for real-time client impact tracking.
- **Technologies:** Deep Learning, Time Series, Docker, Python, C++, and Javascript.