

KARL ST-ARNAUD

Sensor integration specialist

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SUMMARY

Specialist in hardware and software integration of various sensors and the development of algorithms to process sensors data

EXPERIENCE

TEST DEVELOPER Display team

Rtings.com

📅 Nov 2024 - Now

- Developed and implemented performance tests to assess motion handling and image quality in consumer display systems.
- Addressed community inquiries related to display technologies and collaborated with cross-functional teams to align future developments with community expectations.
- Established robust, reusable testing methodologies ensuring repeatable and comparable results across diverse display technologies.

INDIVIDUAL CONTRIBUTOR (IC) Hardware group

Torc Robotics

📅 Nov 2023 - Nov 2024

- Guide the technical progress of the hardware group team: calibration, hardware in the loop (HiL) and autonomous driving kit (AD-Kit)
- Overview of technical activities of the HiL team during the managerial transition and support the team's expansion from 2 to 6 members.

ENGINEERING MANAGER Perception capture team

Torc Robotics

📅 April 2023 - Nov 2023

- Managed a new team of six people and provided an overview of the operation of Montreal vehicles.
- Led the technical integration of the vision system (formerly Algolux) on the next generation of Torc trucks

TECH LEAD Fleet team

Algolux

📅 Nov 2020 - April 2023

- Led the technical development in a team of 7 people using Agile workflow.
- Implemented the Lidar and camera calibration API using C++ and Python.
- Performed software and hardware integration of multiple sensors such as Lidars, cameras, radar, GNSS, and IMU on four different vehicles

IMAGING RESEARCHER

Algolux

📅 Oct 2017 - Nov 2020

- Actively engaged in the research, development, and testing of the ATLAS API with a team of 10 people.
- Developed using Python, key performance indicators (KPI) to monitor image quality (Numpy, OpenCV, Scikit, Scipy, Matplotlib).

PROJECT

MASTER THESIS Laboratoire Radiologie Optique

Polytechnique Montreal

📅 Sep 2015 - Oct 2017

Development of a Raman imaging probe for wide-field tissue molecular characterization. Polytechnique Montreal best memory thesis of 2018

SKILLS

Programming

Python numpy matplotlib
OpenCV C++ Labview Matlab

Engineering tools

ROS Zemax Freecad VScode
Pycharm LATEX Office Jira

DevOps

Docker GIT Agile Linux
AWS Jenkins

STRENGTHS

Dedicated

Motivated by my work, I am a hard worker who will always do the extra steps to achieve the work expected.

Quick learner

I am always interested in acquiring new knowledge useful to my work.

LANGUAGES

French

Native

English

Advanced

EDUCATION

M.SC. IN BIOMEDICAL ENGINEERING

Polytechnique Montreal

2015 - 2017

B.S. IN PHYSICS ENGINEERING

Polytechnique Montreal

2011 - 2015

HOBBIES

Cycling Podcast Reading Music