

THIERRY POUPLIER, B.Eng

91, RUE MONTCALM
BLAINVILLE, QUÉBEC
J7C 2R7

Cellular. : 514-887-1674
thierrypouplier@gmail.com
github.com/gortium

RESUME

Versatile developer with 8+ years of experience in designing mobile and autonomous robots, as well as in machine learning. Specialties: reinforcement learning, embedded systems, sensor integration and data fusion, trajectory calculation, computer networking, interdisciplinary collaboration, software team management, and technical communication.

PROFESSIONAL EXPERIENCE

Climbing Arborist

Since May 2023

JolysArbres, Arbre Nature, freelance

- Climbing trees to fell or prune them in confined environments.
- Following up with clients, determining needs, and sending invoices and quotes.
- Received positive feedback.: <https://maps.app.goo.gl/nKqgNso2c7v5zh6M6>

Robotics Test Developer

September 2019 to February 2022

Kinova, Blainville

- Create a new suite of unit and integration tests in C++ and Python for robotic arms.
- Collaborate with software, control, and production teams.
- Execute tests using Pytest, Jenkins, Selenium and Docker on a fleet of robotic arms.

Co-founder, Principal Systems Director

May 2019 to February 2020

Aeronyx, Montréal

- Participated in the Centech startup incubation program.
- Predicted flight time and travel time using models and the Google Maps API to identify industrial parks most suitable for drone delivery.

Convolutional Neural Network Accelerator Developer

2018 (stage)

Laboratory LACIME, ÉTS

- Synthesize 60+ scientific articles on convolutional network accelerators.
- Develop a simulation of a new accelerator architecture in C++.

Co-founder, Software Director

May 2017 to August 2019

Naova Scientific Club, ÉTS

- Supervise and coordinate the software team.
- Develop a Linear Inverted Pendulum (LIP) algorithm for bipedal robot walking.
- Develop a Deep Q-Learning reinforcement learning algorithm.
- Teach courses on Deep Q-Learning, ROS, and Git to club members.

Robotics Developer

2016 (Double Internship)

Institut du Véhicule Innovant, Saint-Jérôme

- Develop in C++ and Python, using ROS on Linux, to make a lawnmower autonomous.
- Plan movements of mobile robots using SLAM, GPS, lidar, and 3D vision.
- Develop a custom CAN bus driver.

Software Director

January 2014 to May 2017

Walking Machine Scientific Club, ÉTS

- Supervise and coordinate the software team on an autonomous humanoid robot project.
- Develop the artificial intelligence for our robot SARA in C++ and Python, using ROS on Linux, to respond to user requests.
- Plan trajectories for robotic arms and mobile bases using SLAM, lidar, and 3D vision.

EDUCATION

Diploma of Vocational Studies in Arboriculture **May 2023**
Centre de Formation Horticole de Laval, Laval

Bachelor's Degree in Electrical Engineering **August 2019**
Specialization: Machine Learning and Control Theory
École de technologie supérieure (ÉTS), Montréal

Diploma of College Studies in Electronics Technology **December 2014**
Specialization: Computers and Networks
Montmorency College, Laval

ACCOMPLISHMENTS

Personal Server **Since February 2022**
Private LLM, Storage, Password Manager, Reverse Proxy

- Configured using Docker Swarm on Linux.
- Developed an AI assistant using Langchain and Ollama.

LH Games **October 2018**
Artificial Intelligence Competition, organized by Polytechnique

- 2nd place in the final ranking.
- Developed an adversarial agent in a multi-agent environment using Deep Q-Learning.

NorthSec **2018 and 2019**
Largest North American Cybersecurity Competition

- 2nd place twice in the final ranking as a hardware specialist.

RoboCup SPL (Standard Platform League) **2018 and 2019**
International Bipedal Robot Soccer Competition
Naova Scientific Club, Montréal and Australia

- 2nd place in the "SPL Challenger Shield" league in Australia

RoboCup@home **2016 and 2017**
International Domestic Assistance Robot Competition
Walking Machine Scientific Club, Germany and Japan

- 19th place in the final ranking in Germany
- 14th place in the final ranking in Japan

PROFILE

Languages: French and English, spoken and written

Programming Languages : C, C++, Python, URDF

Software: PyTorch, Docker, Jenkins, NumPy scikit-learn, pyTest, Selenium, ROS (Robot Operating System), Linux, Git, Atlassian suite, Visual Studio Code, MS Office, Slack, Gazebo simulator.

Technical Skills: Embedded Systems, Reinforcement Learning, Convolutional Neural Networks, Navigation Systems, Linear and Non-linear Real-time Control Systems, Direct and Inverse Kinematics of 6 DOF Robots, Angular and Cartesian Trajectory Calculations with Vias, Design of Digital Filters, Computer Networking, testing.

Personal Characteristics: Eager to learn, Analytical mindset, Interdisciplinary collaborator, Natural communicator, Effective planner, Business-oriented vision, Structured Approach to Development

Interests and Hobbies : Tree climbing (roped), Brazilian jiu-jitsu, mountain biking, canoe camping