Lucas Carpentier

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Profile

Currently in my final year at SeaTech Toulon engineering school, I am seeking a 22-week internship starting on March 3, 2025, and ending on August 29, 2025, in the fields of software development in robotics and artificial intelligence.

Education

- **Mechatronics Engineering Degree**, SeaTech Toulon *2022-Present*
  - Robot kinematics, actuators, and sensors, linear and nonlinear control
  - Analytical tools: matrix computation, scientific computation, probability, and statistics
  - Programming: Python, C, C++, C#, Java, MATLAB, Simulink, MySQL
  - Machine Learning: supervised, unsupervised learning, reinforcement learning (OpenAI Gym)
  - Humanities, accounting, management, project management, and auditing

- **Preparatory Classes for Engineering Schools**, Lycée Faidherbe de Lille *2020-2022*
  - Classical physics, electromagnetism, optics, mechanics
  - Mathematics: analysis and linear algebra
  - Health and Prevention Project: measuring and analyzing blood flow to detect blood diseases

Professional Experience

- **Assistant Engineer**, ETS Montreal *April 2024 - August 2024*
  Montreal, Quebec, Canada
  - Implementation of the cuRobo library on a Doosan M1013 robot
  - Deployment on Ubuntu 22.04 using Docker
  - Using ROS Noetic and ROS2 Humble
  - Simulations with Isaac-Sim and GPU acceleration using CUDA
  - Mapping with an Intel RealSense D405 depth camera using Nvblox
  - Programming scripts in Python and C++
  - Acquiring skills in Linux systems, Bash, and Git version control

- **Worker Intern**, YKK France *June 2023 - July 2023*
  Seclin, France
  - Manufacturing zippers according to customer specifications
  - Working in a team of 20 people
  - Stock management

Soft Skills:

- Effective communication and time management
- Rigorous problem-solving of complex issues
- Initiative-taking and curiosity for innovation

Programming:

- Python, C, C++, C#, Java, SQL
- JetBrains IDE, Visual Studio, LaTeX Editor, Git

Frameworks/API/Libraries:

- TensorFlow, PyTorch, OpenAI Gym, NumPy, Pandas, Matplotlib
- Seaborn, SciPy, Scikit-learn, cuRobo, cuDNN, OpenCV

Interests:

- Automotive: passion for the industry and mechanics
- Geopolitics: reading about global economic impacts

Languages:

- French: Native language
- English: C1 level (TOEIC 985/990), school exchange in the United States
- Spanish: Academic level, practiced during trips to Spain and Mexico