NATHAN ODIC

M.A.Sc. in Computer Science, Polytechnique Montréal

Montréal, Canada — nathan.odic@posteo.net — Website — Google Scholar

EDUCATION

Master of Applied Science   September 2023 - August 2025
Polytechnique Montréal, Québec, Canada
Department of Computer Science
Advised by Prof. Lama Séoud
GPA : 3.9/4.0
Relevant coursework :
- IFT6135 - Representation Learning — A+
- INF8175 - AI : Methods & Algorithms — A

Diplôme d'Ingénieur (French Engineering Degree)   September 2021 - July 2023
École des Mines d'Alès, France
Department of Computer Science
GPA : 3.58/4.0
Relevant coursework :
- Computer Vision — A

French Preparatory Classes   September 2019 - July 2021
Lycée Georges Clemenceau, Nantes, France
Mathematics and Physics
Intensive post-high school courses to enter France's "Grandes Écoles"
GPA : 4.0/4.0

RESEARCH EXPERIENCE

Graduate Research Student   January 2024 - August 2025
VisionIC, Polytechnique Montréal, QC, Canada
Project led by the National Research Council (NRC) of Canada's METALTec
R&D group. Worked on the segmentation of RGB-Depth images under occlusion
across multiple cameras, followed by the 3D reconstruction of segmented objects
using multi-view camera calibration. Proposed new RGB-D architectures for one-
and two-step segmentation, achieving up to 15% improvement in performance
compared to state-of-the-art methods.
Led to two peer-reviewed publications in international conference and journal.

Graduate Research Student   October 2021 - November 2023
*EuroMov Digital Health in Motion, Université de Montpellier, IMT Mines Alès,
France*
Collaborative project with LIRMM, the joint research entity of the University
of Montpellier, INRIA, and the French National Center for Scientific Research
(CNRS). Worked on detection and tracking algorithms for fisheye videos. Pro-
posed a new tracking dataset and developed a tracking algorithm that outper-
formed the state-of-the-art by over 2% while being twice as fast.
Led to two peer-reviewed publications in international conferences.

EMPLOYMENT

R&D ML Intern   May 2023 - July 2023
SYD Digital Care, Nantes, France
Department of Customer Interaction
Case study on the application of machine learning in contact center solutions, focus-
ing on the development of various LLM fine-tuning and retrieval-augmented generation
techniques for tasks such as customer request classification, satisfaction analysis, and
emotion detection to ensure better customer care.

ACADEMIC ACTIVITIES

Journal Reviewer: Robotics and Computer-Integrated Manufacturing (Q1).

Research Supervision: Supervised an undergraduate student for a research project (Summer 2024).

PUBLICATIONS

(* denotes equal contribution)

Manuscripts in Review:

SepInst: Separation-Aware RGB-D Instance Segmentation 2025
Nathan Odic, S.H.H. Zargarbashi, Sabrina Jocelyn, Lama Séoud
Under revision in *International Journal of Computer Vision*

Peer Reviewed and Accepted:

MuViH: Multi-View Hand gesture dataset and recognition pipeline for human-robot inter-action 2025
Corentin Hubert*, Nathan Odic*, Marie Noel, Sidney Gharib, S.H.H. Zargarbashi, Lama Séoud
Robotics and Computer-Integrated Manufacturing - Q1 (Impact Factor: 11.4)

Collaborative Robotic Finishing Platform for Metal Part Processing Towards Industry 5.0 2024
S.H.H. Zargarbashi et al.
IEEE International Conference on Mechanical and Aerospace Engineering (ICMAE) - Main Conference

FORT: Fisheye Online Realtime Tracking with an Improved Kalman Filter 2023
Nathan Odic, Benoit Faure, Baptiste Magnier
IEEE 25th International Workshop on Multimedia Signal Processing (MMSP) - Main Conference

Performance of Recent tiny/small YOLO Versions in the Context of Top-view Fisheye Images 2022
Benoit Faure, Nathan Odic, Olfa Haggui, Baptiste Magnier
International Conference on Image Analysis and Processing - ISHAPE Workshop

SKILLS

Languages:

- French (Native)
- English (C1 — TOEFL 104/120)
- Spanish (B2)

Computer: Python, PyTorch, TensorFlow, JAX, C.