Grenoble, France
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Michel Aractingi

Ph.D. in Robotics & AI

michel-aractingi.github.io
Personal Youtube Playlist

Experience

Robotics Machine Learning Engineer — **Enchanted Tools** — **Dec 2023 — present**

Recently started a new role to design and setup the machine learning and reinforcement learning base experiments for the ballbot-based humanoids at Enchanted Tools.

Ph.D. Candidate — **NaverLabs Europe and LAAS/CNRS** — **Jul 2020 — Jun 2023**

Advisors: Philippe Soueres, Tomi Silander — Grenoble & Toulouse, France

- Wrote 3 papers in various domains related to robotics, deep reinforcement learning, quadruped locomotion, model-based control, sim2real transfer, hierarchical learning and computer vision. Directly worked on and operated 3 different quadruped robots.
- Implemented the first deep reinforcement learning based controller for Solo-12 in LAAS with open-source implementation.
- Designed and implemented a hierarchical approach to enhance the baseline locomotion of MIT's Mini-Cheetah quadruped.
- Co-supervised a group of Master interns and provided them a deep RL controller for bipedal locomotion on the Bolt robot.
- Added a vision system via a RealSense camera to the Mini-Cheetah robot, using an external computer (Nvidia Jetson Nano).

Research Engineer — **NaverLabs Europe** — **Nov 2018 — Jun 2020**

Advisor: Tomi Silander — Grenoble, France

- Published two papers in top-tier conferences in domains related to real robot navigation, generalization in visual navigation and navigation in multi-human dynamic environments. I worked on different wheeled robots including the LoCoBot.
- Received a *Best Paper Award* nomination at RSS 2022 for work on visual navigation in crowded dynamic environments.

Research Intern — **Inria** — **Feb 2018 — Jul 2018**

Advisor: Cordelia Schmid — Grenoble, France

- Worked on learning manipulation skills from image input within the domains of reinforcement and imitation learning.
- Implemented and improved several imitation learning algorithms, including Dagger, for tasks related to grasping and stacking.

Research Intern — **FabLab Mastic** — **May 2017 — Jul 2017**

Advisor: Olivier Aycard — Grenoble, France

- Implemented visual odometry and SLAM systems for a wheeled robot with lidar and RealSense camera.

Education

Ph.D. in Robotics and Artificial Intelligence, University of Toulouse, France — **2020 — 2023**

M.Sc. in Computer Science, Grenoble Alpes University, France, GPA: 15/20 (top 5%) — **2016 — 2018**

B.Sc. in Electrical Engineering, University of Balamand, Lebanon, GPA: 3.13 (top 5%) — **2013 — 2016**

Dean's Honor List Scholarship, 2014 and 2015

Skills

Technologies	C++, Python, PyTorch, Unix, ROS, PyBullet, Raisim, IsaacGym
Domains	Deep reinforcement learning, imitation learning, computer vision, robotics, control
Others	Algorithms, neural networks, transformers, AI Habitat, IGibson, MIT's Cheetah Software,

Publications

- M. Aractingi, P.A. Léziart, T. Flayols, J. Perez, T. Silander and P. Soueres. A Hierarchical Scheme for Adapting Learned Quadruped Locomotion. In *IEEE Humanoids 2023.*
- M. Aractingi, P.A. Léziart, T. Flayols, J. Perez, T. Silander and P. Soueres. Controlling the Solo12 Quadruped Robot with Deep Reinforcement Learning. In *Scientific Reports.*
- G. Monaci, M. Aractingi and T. Silander. DiPCAN: Distilling privileged information for crowd-aware navigation. In *RSS 2022*, **Best paper award nominee**.
- M. Aractingi, P.A. Léziart, T. Flayols, J. Perez, T. Silander and P. Soueres. Learning to Adapt the Trotting Gait of the Solo Quadruped. *preprint*
- M. Aractingi, C. Dance, J. Perez and T. Silander. Improving the generalization of visual navigation policies using invariance regularization. In *ICML 2019*, RL4RealLife workshop

Interests

- Fluent in English and French, Arabic is my mother tongue.
- Contributed to 4electron.com as an author from 2014 to 2018. Our focus was on enhancing the online scientific content in Arabic.
- Reviewed for ICRA, IROS and Ubiquitous Robots.
- Football, Guitar and Hiking.

References

Contact my advisors and collaborators: Tomi Silander (Naver Labs Europe), Philippe Soueres (LAAS-CNRS), Julien Perez (Naver Labs Europe), and Thomas Flayols (LAAS-CNRS).