Carlo Rapisarda

Personal Data

Place and Date of Birth:	Catania, Italy | May 10, 1996
Location:	Stockholm, Sweden
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Education

2017-19 — MSc in Computer Science
KTH Royal Institute of Technology, Stockholm, Sweden
Specialized in Data Science / Machine Learning
Thesis: *RL for Dexterity Transfer Between Manipulators*

2014-17 — BSc in Computer Engineering
Politecnico di Torino, Turin, Italy

Work Experience

Ongoing / Jun 2019 — iOS Developer at Bontouch AB, Stockholm, Sweden
Currently building world-class apps at Bontouch. Part of the team developing the Post-it® app for iOS and macOS, which has been publicly praised by Apple in multiple occasions. The product makes use of the latest advancements regarding technologies such as **Mac Catalyst**, **AVFoundation**, and **SceneKit**.

Jul-Sep 2018 — Research Engineer at KTH Royal Institute of Technology
Worked at the Robotics, Perception and Learning lab (RPL), helping PhD students and implementing methods for robot motion control, grasping, and object pose estimation with **Computer Vision** techniques.

Mar-Jun 2017 — Intern at Telematica Informatica, Turin, Italy
Part of the BSc program. Front-end mobile development with Swift, React Native, Redux, React Navigation, ImmutableJS. Received bonus point on the BSc final grade as a result of the very positive comments from co-workers and from the PM.

Projects

Jun 2019 — Reinforcement Learning for Dexterity Transfer Between Manipulators
Experimental research thesis developed at KTH at the end of the MSc program. The novel method proposed in this work can be used to transfer complex manipulation skills between robots with different morphologies, so that knowledge that has already been acquired can be leveraged to accomplish new tasks.
Python | PyTorch | Deep Reinforcement Learning | Robotics | Control
http://www.diva-portal.org/smash/record.jsf?pid=diva2:1383140
https://carlorapisarda.me/projects/ms-thesis/report.pdf

Dec 2018 — Learning Enriched Latent Spaces for Flexible Model-based Control
Implementation of a novel control pipeline for OpenAI's continuous-space environments starting from images, consisting of a dynamic-β-VAE for the image compression and disentanglement, a MLP for the model dynamics, and a MPC for the control.
Python | PyTorch | VAE | Reinforcement Learning | Vision-based Control
https://github.com/DarthPumpkin/generative-parametrizations
https://carlorapisarda.me/projects/gpp/report.pdf

May 2018	Video Frame Interpolation via Adaptive Separable Convolution Reproduction of a research paper on state-of-the-art methods for video interpolation. The resulting neural network achieves performance comparable to the original work, and was trained with a novel loss function. **Python** | **PyTorch** | **CNN** | **Image Processing** | **Video Processing** https://github.com/martkartasev/sepconv https://arxiv.org/abs/1809.07759
2017-18	Stress and Energy Tracking System for persons with TBI Development of a mobile application for individuals with Traumatic Brain Injury. The app is connected to a wireless sensor, monitoring real-time data, and predicting stress and energy levels with Machine Learning techniques. **iOS** | **Swift** | **Objective-C++** | **Python** | **SVM** | **Signal Processing** https://github.com/AssistiveTech-StressSensor/ATStressSensor http://assistivetech.se/stress-sensor

Technical Skills

Advanced:	Objective-C, Swift, Python, C
Intermediate:	C++, JavaScript, Java
Basic:	SQL, MATLAB, Rust
Packages used:	NumPy, PyTorch, Scikit-learn, Matplotlib, Pandas, PyKDL
Tools used:	ROS, MuJoCo, PyBullet, OpenRAVE, MATLAB, Git, Jupyter

Languages

Italian:	Native
English:	Full Professional Proficiency
Spanish:	Basic Knowledge

Certificates

Nov 2016	IELTS Certificate
Jun 2014	Cambridge CPE

Interests and Activities

Artificial Intelligence, Mobile Development, Reinforcement Learning, Robotics, Computer Vision, Photography, Hi-Fi Audio, Traveling, Cycling

Links

GitHub:	https://github.com/carlo-
LinkedIn:	https://www.linkedin.com/in/carlorapisarda