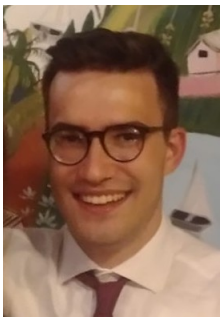

Niccolo’ Turcato

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Date of birth: 29/09/1998 Nationality: Italiana Mother tongue(s): Italiano

EDUCATION

Graduate studies

MSc Student in Computer Engineering

(University of Padova)

2020-2022

Final Grade: 110L

Final Project: Model Based Reinforcement learning for industrial robotics applications.

Final Degree Project Brief Description:

The project consists in exploring the use of Model-Based Reinforcement Learning algorithms in the context of industrial manipulators. The considered test case is learning a policy for tossing an object in a bin with a robotic arm.

We relied on the Reinforcement Learning framework Monte Carlo probabilistic inference for learning control (MC-PILCO) to derive the tossing policy. We used a Franka Emilka Panda Robot controlled with ROS control. We carried out experiments both on simulated and real setups.

Supervisor: prof. Ruggero Carli

Undergraduate studies

First level degree in Ingegneria Informatica

(University of Padova)

2017-2020

Final Grade: 110 (over 110)

Final Degree Project: Implementazione dell'euristico ZIRound per problemi MIP

Supervisor: prof. Domenico Salvagnin

Grade Point Average: 27.77 (over 30)

High School

High School Diploma: “Diploma di istruzione Tecnica - indirizzo INFORMATICA e TELECOMUNICAZIONI - articolazione INFORMATICA”
I.I.S. Viola-Marchesini (Rovigo - Italy - https://www.iisviolamarchesini.edu.it)

Start (12, 09) –End (17, 07)

Grade: 89 (over 100)

OTHER RELEVANT EDUCATIONAL EXPERIENCES

(21/03/2022 - 06/05/2022) Research Training experience at the department of Information Engineering of the University of Padova, under the supervision of prof. Ruggero Carli, the topic was: “Development of Deep Learning and Gaussian Processes based learning algorithms for estimation of inverse dynamics of mechanical systems”.

(2017) Computer technical certification Cisco IT essentials v5.0 at I.I.S. “VIOLA-MARCHESINI”, Rovigo.

(2016) General worker training, Medium-risk worker training, low risk fire worker training, at I.I.S. “VIOLA-MARCHESINI”, Rovigo.

RELEVANT PROFESSIONAL EXPERIENCES

(2021- 2023) Tutor junior for Calculus 1 and Linear Algebra courses for the Information Engineering, Ingegneria Biomedica and Ingegneria Aerospaziale BcS Degrees at the Information Engineering and Industrial Engineering Departments of the University of Padova.

(2020) Tutor for volunteer project TOP (Tutoring Online Project) organized by Harvard and Bocconi University. (https://leap.unibocconi.eu/projects/progetto-top)

(2016) Stage: FinTechnologies, Badia Polesine (RO)

(2015) Stage: Videouno di Padovan R. & E. S.n.C., Lendinara (RO)

PERSONAL SKILLS

English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B2	B2	B2	B2	B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Other known language(s)

Computer skills

Advanced: Programming (C++, Python, Matlab, Java, C#, ARM Assembly), software development and versioning. Machine Learning and Deep Learning knowledge and experience.

Intermediate: LaTeX and Office packages skills. Web development. Computer systems and computer networks repair and maintenance.

Basic: Video editing, CAD.

ADDITIONAL INFORMATION

Awards

Premio “Sergio Gambi” 2021. Awarded as first ranked between first year Master’s Degree students and 4th year single-cycle Master’s Degree students of the Schools of Engineering and Science, of the University of Padova, in possession of the merit and income requirements established by the call for applications.

Premio “Sergio Gambi” 2022. Awarded as first ranked between second year Master’s Degree students and 5th year single-cycle Master’s Degree students of the Schools of Engineering and Science, of the University of Padova, in possession of the merit and income requirements established by the call for applications.

(https://www.unipd.it/archivio-borse-premi-studio-studenti)

ACCEPTED PUBLICATIONS

International Conferences

G. Giacomuzzo, N. Turcato, A. Dalla Libera, R. Carli, “Advantages of a physics-embedding kernel for robot inverse dynamics identification”, MED’22 30th Mediterranean Conference on Control and Automation.

G. Giacomuzzo, N. Turcato, A. Dalla Libera, R. Carli, “Embedding the Physics in Black-box Inverse Dynamics Identification: a Comparison Between Gaussian Processes and Neural Networks”, IFAC 22nd World Congress 2023, Yokohama, JAPAN.

SUBMITTED PUBLICATIONS

International Conferences

N. Turcato, A. Dalla Libera, G. Giacomuzzo, R. Carli, “Teaching a Robot to Toss Arbitrary Objects with Model-Based Reinforcement Learning”, 9thInternational conference on control, decision and information technologies 2023, Rome, Italy.