

Angelo Damiani, Ph.D.

Security Engineer

"I do not fear computers. I fear lack of them."
- Isaac Asimov

Profile

Name:	Angelo Damiani	Phone:	(+39) 346 8674823
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Work History

2024-Now **Security Engineer @ Service Design & Governance**, Leonardo S.p.A..



- Multiviewer Solutions Full-stack developer
- Project Engineering Manager Support

Education

2019-2024 **Doctor of Philosophy: Computer Science**, Gran Sasso Science Institute.



Thesis: *Enhancing Data Efficiency in Reinforcement Learning through Inverse and Transfer Reinforcement Learning*
Research Area: Reinforcement Learning

2016-2019 **Master of Engineering: Computer and Systems Engineering**, University of L'Aquila.



Thesis: *Modeling and Adaptive Model Predictive Control of a Hydraulic McKibben Muscle*
Thesis' area: System Identification and Optimal Control
Final Grade: 110/110 cum laude and Academic Mention

2012-2016 **Bachelor of Engineering: Information Engineering**, University of L'Aquila.



Thesis: *Implementation of a RSTP plug-in for the OpenFlow-based controller Ryu*
Thesis' area: Telecommunication and Software Defined Networks
Final Grade: 110/110 cum laude

Experience Abroad

2018-2019 **Research Exchange Program**, Shibaura Institute of Technology, Tokyo, Japan.




While there I worked on my Master's Degree thesis which was about modeling and control a hydraulic McKibben artificial muscle. A black-box System Identification has been used to define a parametric model. Parameters, then, are iteratively refined using the Recursive Least Squares algorithm during the functioning. In the end this adaptive model has been used by an MPC to control the displacement of the artificial muscle.

Aug. 2018 **Pre-doctoral Research School**, Max Planck Institute for Software Systems, Saarbrücken, Germany.



"The Cornell, Maryland, Max Planck Pre-doctoral Research School 2018" was a one week pre-doctoral summer school to be exposed to the state of the art and cutting-edge research topics in computer science.

- Sept. 2017  **Assistive Technology Workshop**, Shibaura Institute of Technology, Omiya, Japan.
"Support Equipment Development International Joint Training Program" was a workshop aimed to study and design auxiliary devices that could help agricultural operators in cultivation activities improving their work conditions and operational efficiency.

Certifications and Personal Projects

- Oct. 2024 Splunk Core Certified Power User
Nov. 2022 IBM ML0210EN: PyTorch Basics for Machine Learning
Oct. 2022 IBM DL0120EN: Deep Learning with Tensorflow
Sept. 2022 IBM ICECPP02: Object Oriented Implementation Using C++
Sept. 2022 IBM ICECPP01: Fundamentals of C++
May 2021 Development of a FitBit application for Japanese Language learning: Japanese Quiz
June 2018 Cisco CCNA 2 Routing and Switching: Routing and Switching Essentials
June 2016 Cisco CCNA 1 Routing and Switching: Introduction to Networks

Skills

Programming

Languages:

- Python (Intermediate/Advanced)
- Javascript (Intermediate)
- C/C++ (Intermediate)
- PHP (Intermediate)
- R (Beginner/Intermediate)
- Go (Beginner)
- Java (Beginner)

Frameworks:

- Keras, TensorFlow, PyTorch, Ray (Machine Learning)
- Ryu (Software Defined Networking)
- JQuery (Web development)
- Bootstrap (Web development)
- Pandas, Numpy, Matplotlib, SciPy (Data Analysis)
- Gym (Reinforcement Learning)

Softwares:

- Jupyter Notebook (Intermediate)
- Octave/MATLAB and Simulink (Intermediate)
- Networks Emulators (Mininet, Cisco Packet Tracer) (Intermediate)
- Database and RDBMS (PostgreSQL/PostGIS, MySQL) (Intermediate)
- Git (Intermediate)
- L^AT_EX (Intermediate)

Publications & Appearances

- July 2024 Damiani, A., Viera López, G., Manganini, G., Metelli, A.M., Restelli, M. "Transfer Learning for Dynamical Systems Models Via Autoencoders and GANs", American Control Conference (ACC): July 10-12, Toronto, Canada, 2024
- July 2022 Damiani, A., Manganini, G., Metelli, A.M., Restelli, M. "Balancing Sample Efficiency and Suboptimality in Inverse Reinforcement Learning", The 39th International Conference on Machine Learning (ICML): July 17-23, Baltimore, Maryland, USA, 2022
- June 2022 Manganini, G., Damiani, A., Metelli, A.M., Restelli, M. "A Novel Inverse Reinforcement Learning Formulation for Sample-Aware Forward Learning", The 5th Multi-disciplinary Conference on Reinforcement Learning and Decision Making (RLDM): June 8-12, Providence, Rhode Island, USA, 2022

Languages

Italiano: First Language

English: Fluent, B2 level certified by *University of L'Aquila*