



# Alessandro Devo

## Curriculum Vitae

### Experience

- 2020 – Present **Co-Founder at Red Lynx Robotics s.r.l.**, RED LYNX ROBOTICS S.R.L., via Mario Donati Guerrieri 16, 06132, Perugia (PG), Italy.
  - *Type of employment:* Co-founder
- 2021 **Visiting Researcher**, TANDON SCHOOL OF ENGINEERING - NEW YORK UNIVERSITY, New York City (NY), United States.
  - *Main activities and responsibilities:* Research activities on Aerial Vehicles, Computer Vision and Deep Reinforcement Learning.
- 2018 **Study Bursary**, ISTITUTO NAZIONALE DI FISICA NUCLEARE (INFN), Perugia (PG), Italy.
  - *Main activities and responsibilities:* Control system development for wireless device RAPID-2

### Education

- 2018 – 2021 **Ph.D. in Industrial and Information Engineering**, University of Perugia, Department of Engineering, Perugia, Italy.
  - *Thesis:* End-to-End Deep Reinforcement Learning Approaches for Autonomous Navigation, Exploration, and Tracking with Mobile Robots
- 2016 – 2018 **Masters Degree in Information and Robotics Engineering**, University of Perugia, Department of Engineering, Perugia, Italy, *Mark: 110/110 cum laude.*
  - *Thesis:* Design and Experimentation of Natural Language Video Description Systems via Recurrent Convolutional Neural Networks for Service Robotics Applications
- 2013 – 2016 **Bachelor Degree in Information and Electronic Engineering**, University of Perugia, Department of Engineering, Perugia, Italy, *Mark: 107/110.*
  - *Thesis:* Realization of an Experimental Network Platform Using Open Source Virtualization Technology for Routing Protocols Analysis

### Reviewer for conferences and journals

IEEE INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION (ICRA), IEEE INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS (IROS), IEEE INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION (ICPR), IEEE ROBOTICS AND AUTOMATION LETTERS (RA-L), IEEE TRANSACTIONS ON ROBOTICS (T-RO), SCIENTIFIC REPORTS

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## Awards

- 2019 Winner of the Best Thesis Award in Information Engineering, Ordine degli Ingegneri, Perugia, Italy.

## Publications

### Journals

- 2022 **Autonomous Single-Image Drone Exploration with Deep Reinforcement Learning and Mixed Reality**, Devo, A.; Mao, J.; Costante, G.; Loianno, G., IEEE Robotics and Automation Letters.
- 2022 **E-VAT: an Asymmetric End-to-End Approach to Visual Active Exploration and Tracking**, Dionigi, A.; Devo, A.; Guiducci, L.; Costante, G., IEEE Robotics and Automation Letters.
- 2021 **Enhancing Continuous Control of Mobile Robots for End-to-End Visual Active Tracking**, Devo, A.; Dionigi, A.; Costante, G., Robotics and Autonomous Systems.
- 2020 **Towards Generalization in Target-Driven Visual Navigation by Using Deep Reinforcement Learning**, Devo, A.; Mezzetti, G.; Costante, G.; Fravolini, M.L.; Valigi, P., IEEE Transactions on Robotics.
- 2020 **Deep Reinforcement Learning for Instruction Following Visual Navigation in 3D Maze-Like Environments**, Devo, A.; Costante, G.; Valigi, P., IEEE Robotics and Automation Letters.
- 2019 **The Role of the Input in Natural Language Video Description**, Cascianelli, S.; Costante, G.; Devo, A.; Ciarfuglia, T.A.; Valigi, P.; Fravolini, M.L., IEEE Transactions on Multimedia.

## Computer skills

Basic	C#, VHDL
Intermediate	COMPUTER HARDWARE, MICROSOFT OFFICE SUITE, APPLE PAGES, APPLE NUMBERS, APPLE KEYNOTE, PGADMIN, WIRESHARK, NODERED, JAVASCRIPT, HTML5, CSS, ALTUM DESIGNER
Advanced	ROBOT OPERATING SYSTEM (ROS), R, OCTAVE, C, C++, MATLAB, JAVA, PYTHON, SWIFT, SQL, L <sup>A</sup> T <sub>E</sub> X, GITHUB, UNREAL ENGINE 4, LINUX, MICROSOFT WINDOWS, APPLE MACOS
Deep Learning technologies	TENSORFLOW, KERAS, PYTORCH

## Languages

Italian	<b>Mothertongue</b>	
English	<b>Advanced</b>	<i>Advanced writing, reading and listening</i>

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