05/05/2024

Matteo Scuderi

EDUCATION AND TRAINING

09/2023 – CURRENT Roma, Italy

Master of Science in Control Engineering Sapienza University of Rome

Website https://www.uniroma1.it

09/2020 – 07/2023 Roma, Italy

Bachelor's Degree in Computer and Automation Engineering (Ingegneria Informatica e Automatica) Sapienza University of Rome

During my Bachelor's degree in Computer and Automation Engineering, I gained expertise in several technical areas, including Control Theory and Automation and Robotics theory. In addition, I developed strong programming skills in languages such as C, C++, C#, Python, Java, and Assembler (IA-32), and gained practical experience in web development using HTML, CSS, JavaScript, PHP, and SQL.

Website https://www.uniroma1.it | **Field of study** Information and Communication Technologies **Final grade** 105/110 **Thesis** Trajectory Tracking and Collision Avoidance via CBF and QP Optimization

Roma, Italy

High School Diploma in Scientific Studies Liceo Scientifico Statale "C. Cavour"

Final grade 88/100

WORK EXPERIENCE

04/2022 – CURRENT Roma, Italy

Web developer Freelance

- Front end and back end developer
- Web designer

Created Code Academy's website: https://www.codeacademyaps.it

09/2021 – 06/2022 Roma, Italy

Educational Robotics Teacher Code Academy

Robotics and programming teacher to kids aged 4 to 14

10/2019 – 03/2020 Roma, Italy

Tourist guide Hummus & Coelum

- Tourist reception
- Guided Tours in English, Italian and Spanish

06/2018 – 09/2018 Roma, Italy

Table waiter Blue Beef

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

Other language(s):

English

Listening C2	**Spoken production** C2
Reading C2	**Spoken interaction** C2
Writing C1	

Spanish

Listening B2	**Spoken production** B1
Reading B2	**Spoken interaction** B1
Writing B1	

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Programming languages: C (Advanced) , C++ (Advanced) , MATLAB (Advanced) ⎮ Experience with PHP, SQL, HTML, CSS, JavaScript ⎮ Microsoft Office ⎮ Python ⎮ Matlab and Matlab Simulink

PROJECTS

- **Trajectory Tracking and Obstacle Avoidance using CBFs**

  Trajectory Tracking and Obstacle Avoidance for mobile robots, using Control Barrier Functions and Quadratic Programming for optimal control (Bachelor's Thesis)

  Link https://youtu.be/M6B1dvNh-hU?si=FN3YRNMHneZnITre

- **Code Academy website programming**

  Front-end and Back-end programming of Code Academy's website

  Link https://www.codeacademyaps.it

- **Satellite Object Detection using YOLO**

  Satellite Object Detection with bounding boxes on different classes (cars, planes, trees...) using the YOLO-NAS algorithm

- **Multivariable Feedback Control**

  Matlab simulations involving H-infinity control for MIMO systems, exploring both performance and robustness.

- **Passivity Based Control for VTOL dynamics**

  Position control of a Vertical Take-Off and Landing Aircraft using Passivity Based Control

- **Solar Tracker using Arduino**

  Construction and programming of a solar tracker using Arduino and Autodesk Fusion for modelling the 3D printed structure.

CREATIVE WORKS

CURRENT

- **Amateur Artist**

  Drawings, Portraits, Digital Art and Murals

CURRENT

- **Amateur Musician**

  Piano, Guitar, Ukulele and Drums

NETWORKS AND MEMBERSHIPS

CURRENT Rome (IT)

- **Associazione Nazionale Paracadutisti d'Italia**

  Skydiving License n° RM-1-5855 released on 01/12/2017 by A.N.P.D.I. (Italian National Parachuters Association)