Alessio Basili

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EDUCATION

• **Politecnico di Milano**   *Feb 2022 - Present*
Master's Degree in Computer Science and Engineering   Milano, MI

• **Universitá degli studi di Urbino 'Carlo Bo'**   *Feb 2022*
Bachelor's Degree in Applied Computer Science   Urbino, PU

• **Istituto Tecnico Industriale Statale 'Enrico Mattei'**   *July 2017*
Diploma of Technical Institute of Information Technology and Telecommunications - Computer Science Specialization   Urbino, PU

PROJECTS

• **Thesis: Porting of smart sensing algorithms from C# to Dart**   [⊕]
                                                                                             [○]
I worked on the SmartRoadSense project, focused on road surface evaluation.
After analyzing the existing algorithms in C# and understanding their functionalities, I studied Dart to
adapt and implement the code following a proper paradigm. I completed the implementation and
conducted a testing phase to ensure consistent and accurate results.

• **Self-hosted Surveillance Camera**

Developed an online surveillance camera system with video and photo recording capabilities,
accessible via a self-hosted VPN server on a Raspberry Pi.

• **RESTful API: URL Shortener API**   [○]

Deployed a Web Service on Heroku exposing RESTful APIs for URL shortening
and management. Additionally, developed a Telegram Bot for the client side to
provide easier access to the service.

• **Parking Lot manager with GUI**

Designed and developed a parking lot manager in C# with a GUI using Visual Studio
and MVC paradigm

• **IoT Device**

Designed and simulated an IoT device using COOJA, and processed data with Contiki,
Node-RED and ThingSpeak via the MQTT protocol.

• **Performance Evaluation of Applications**

Modeled application behavior and analyzed system performance using Python and
Java Modeling Tool (JMT).

OTHER PROJECTS

• **Optimized Select-Sort written in Assembly**
• **Formal verification of concurrent and synchronization models in NuSMV**

EXPERIENCE

• **I.T.E.T. 'Bramante - Genga'**   *January 2022*
Substitute professor for "Computer Science and Technology"   Pesaro, PU

SKILLS

• **Programming Languages:** Python, Java, C, C#, HTML, PHP, SQL, Dart, XML, JavaScript, JSON, LaTex

• **Database Systems:** PostgreSQL, MySQL, MongoDB

• **DevOps & Version Control:** GitHub

• **Mathematical & Statistical Tools:** MatLab, Python (Pandas, NumPy)

• **Other Tools & Technologies:** Office suites, Visual Studio, VS Code, Jupiter Notebook

CERTIFICATIONS

- **EASA:** UAS Remote Pilot Open Category A1-A3
- **PF24:** Completion of the required 24 university credits for teacher qualification *July 2021*
- **BLS-D/PBLS-D:** Basic Life Support and Defibrillation certification for first aid *March 2017*
- **General Safety Training Course for Workers**

VOLUNTEER EXPERIENCE

- **Board Member and recording secretary** *September 2014 - Present*
  A.S.D. Team RCM
  - Nationally Recognized Organized Racing and Motorsport Events
  - Donation of profits to charity
  - Decision-making skills and management

- **Football Referee** *December 2017 - Present*
  FIGC - AIA

- **President of the polling station and election scrutineer** *2021 - 2024*

- **Qualified Course Marshal**
  ACI Sport
  Marshal at the World Rally Championship in Sardinia, in Roma Capitale
  and at the Italian Rally Championship

- **Blood donor** *August 2019 - Present*
  AVIS

ADDITIONAL INFORMATION

Languages: Italian (Native), English (Professional level)