

# Alessio Basili

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## EDUCATION

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

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- **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

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

## EXPERIENCE

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

## SKILLS

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- **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

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- **EASA:** UAS Remote Pilot Open Category A1-A3 *July 2021*
- **PF24:** Completion of the required 24 university credits for teacher qualification *March 2017*
- **BLS-D/PBLS-D:** Basic Life Support and Defibrillation certification for first aid *July 2025*
- **General Safety Training Course for Workers**
- **My Open Bdge - Politecnico di Milano:** [Buddy Project 24/25](#) *July 2025*

## VOLUNTEER EXPERIENCE

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- **Football Referee** *December 2017 - Present*  
*FIGC - AIA*
- **President of the polling station and election scrutineer** *2021 - 2024 - 2025*
- **Qualified Course Marshal**  
*ACI Sport*  
Main events: Marshal at WRC Sardinia, WRC Roma Capitale and Italian Rally Championship
- **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
- **Blood donor** *August 2019 - Present*  
*AVIS*

## ADDITIONAL INFORMATION

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