



Vincenzo Barbuto

PhD Student in ICT

📍 Rende (CS), Italy

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Education

PhD in Information and Communication Technologies , <i>University of Calabria</i> 🔗 Intelligence at the IoT Edge: models and techniques for enabling smartness in IoT systems.	11/2022 – present Cosenza, Italy
M.S. Computer Engineering for the Internet of Things , <i>University of Calabria</i> 🔗 Final Score 110/110 cum laude	09/2020 – 09/2022 Cosenza, Italy
M.S. in Data Science and Network Intelligence , <i>Télécom SudParis, Institut Polytechnique de Paris</i> 🔗 GAP 18,34/20	09/2021 – 07/2022 Évry, France
B.S. in Computer Engineering , <i>University of Calabria</i> 🔗 Final Score 105/110	09/2017 – 09/2020 Cosenza, Italy



Professional Experience

Teaching Assistant , <i>University of Calabria</i> 🔗 Assisted first-year students in learning the C programming language	03/2023 – present Cosenza, Italy
Research Trainee - IoT and Digital Twins , <i>DICE Lab</i> 🔗 <ul style="list-style-type: none">Implemented a Traffic Monitoring System based on Digital Twins and Edge AI99,87% of bandwidth saved with respect to a Cloud-centric approachinferences performed from 2 to 10 times faster in the edge device than in a remote server	02/2022 – 06/2022 Évry, France
Software Engineer , <i>Caliò Informatica S.R.L.</i> 🔗 <ul style="list-style-type: none">Reduced the http request throughput of a platform that manages over five million invoices per year by using the browser cacheReduced the processing time of a huge number of downloaded invoices by exploiting threads and parallelism in C#Exploited SQL bulk functions to reduce both the insertion and update time of warehouse's items in a Content Management System (CMS)	12/2020 – 09/2021 Cosenza, Italy

Projects

Diabetes Management System , <i>IoT system able to manage autonomously Type 1 Diabetes Mellitus patients</i> <ul style="list-style-type: none">Designed an improved IoT system using an hybrid-fog network architecture that exploits in-network computingReduced computing time by 70% moving some computation from the cloud to edge and fog devices	2022
Health Environment , <i>IoT system able to monitor remotely the environment of a home for elderly</i> <ul style="list-style-type: none">Acquired experience with MQTT protocol using OMA LwM2M semantic for the topic definitionAcquired experience with time series databases such as InfluxDBProcessed, analyzed and displayed huge amount of data acquiring experience with tools such as NodeRed, Grafana and OpenHAB	2021

Publications

- Opportunistic Digital Twin: an Edge Intelligence enabler for Smart City**, ACM  08/2023
Savaglio, C.; Barbuto, V.; Awan, F. M.; Minerva, R.; Crespi, N.; Fortino, G.
- Towards an Edge Intelligence-based Traffic Monitoring System**, IEEE 06/2023
Barbuto, V.; Savaglio, C.; Minerva, R.; Crespi, N.; Fortino, G.
Accepted in IEEE International Conference on Systems, Man, and Cybernetics
- Disclosing Edge Intelligence: A Systematic Meta-Survey**, MDPI  03/2023
Barbuto, V.; Savaglio, C.; Chen, M.; Fortino, G. Big Data Cogn. Comput. 2023, 7, 44.

Awards

- Most deserving student**, in *Computer Engineering for the IoT* 2022
Most dedicated and highest-achieving student among the Internet of Things (IoT) students within the Department of Computer, Modeling, Electronic, and System Engineering, University of Calabria for the academic year 2020-21 and 2021-22
- DIMES Excellence Program**, in *Computer Engineering* 2021
Outstanding undergraduate student in the Department of Computer, Modeling, Electronic, and System Engineering, University of Calabria for the academic year 2020-21