

# Vincenzo Barbuto

## PhD Student

📍 Rende (CS), Italy

☎ +39 3402112089

🏠 Google Scholar

✉ [vinz.barbuto@dimes.unical.com](mailto:vinz.barbuto@dimes.unical.com)

in Vincenzo Barbuto

🆔 ORCID



## Education

**PhD in Information and Communication Technologies, University of Calabria** [🔗](#)  
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, University of Calabria** [🔗](#)  
**Final Score 110/110 cum laude**

09/2020 – 09/2022  
Cosenza, Italy

**M.S. in Data Science and Network Intelligence,**  
*Télécom SudParis, Institut Polytechnique de Paris* [🔗](#)  
**GAP 18,34/20**

09/2021 – 07/2022  
Évry, France

**B.S. in Computer Engineering, University of Calabria** [🔗](#)  
**Final Score 105/110**

2017 – 2020  
Cosenza, Italy

## Professional Experience

**Teaching Assistant, University of Calabria** [🔗](#)  
Assisted first-year students in learning the C programming language

03/2023 – present  
Cosenza, Italy

**Research Trainee - IoT and Digital Twins, DICE Lab** [🔗](#)

- Implemented a **Traffic Monitoring System** based on **Digital Twins** and **Edge AI**
- **99,87% of bandwidth saved** with respect to a Cloud-centric approach
- **inferences performed from 2 to 10 times faster** in the edge device than in a remote server

02/2022 – 06/2022  
Évry, France

**Software Engineer, Calìò Informatica S.R.L** [🔗](#)

- Reduced the http request throughput of a platform that manages over five million invoices per year by **using the browser cache**
- Reduced 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,**

*IoT system able to manage autonomously Type 1 Diabetes Mellitus patients*

- Designed an improved IoT system using an **hybrid-fog network architecture** that exploits **in-network computing**
- **Reduced computing time by 70% moving some computation from the cloud to edge and fog devices**

2022

**Health Environment,**

*IoT system able to monitor remotely the environment of a home for elderly*

- **Acquired experience with MQTT protocol using OMA LwM2M semantic** for the topic definition
- Acquired experience with time series databases such as **InfluxDB**
- Processed, analyzed and displayed huge amount of data acquiring experience with tools such as **NodeRed, Grafana** and **OpenHAB**

2021

## Publications

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### **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

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### **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