Vincenzo Barbuto

PhD Student in ICT

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Education

PhD in Information and Communication Technologies, *University of Calabria* 🔗   11/2022 – present
Intelligence at the IoT Edge: models and techniques for enabling smartness in IoT   Cosenza, Italy
systems.

M.S. Computer Engineering for the Internet of Things, *University of Calabria* 🔗   09/2020 – 09/2022
Final Score 110/110 cum laude   Cosenza, Italy

M.S. in Data Science and Network Intelligence,   09/2021 – 07/2022
Télécom SudParis, Institut Polytechnique de Paris 🔗   Évry, France
GAP 18,34/20

B.S. in Computer Engineering, *University of Calabria* 🔗   09/2017 – 09/2020
Final Score 105/110   Cosenza, Italy

Professional Experience

Teaching Assistant, *University of Calabria* 🔗   03/2023 – present
Assisted first-year students in learning the C programming language   Cosenza, Italy

Research Trainee - IoT and Digital Twins, *DICE Lab* 🔗   02/2022 – 06/2022
- Implemented a **Traffic Monitoring System** based on **Digital Twins** and **Edge AI**   Évry, France
- **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

Software Engineer, *Caliò Informatica S.R.L* 🔗   12/2020 – 09/2021
- Reduced the http request throughput of a platform that manages over five million   Cosenza, Italy
  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)

Projects

Diabetes Management System,   2022
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**

Health Environment,   2021
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**

Publications

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