Vincenzo Barbuto

PhD Candidate

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in Vincenzo Barbuto

Education

PhD in Information and Communication Technologies, *University of Calabria* ⧉
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

Research Trainee - IoT and Digital Twins, *DICE Lab* ⧉
02/2022 — 06/2022
Évry, France
- 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

Software Engineer, *Caliò Informatica S.R.L* ⧉
12/2020 — 09/2021
Cosenza, Italy
- 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)

Projects

Diabetes Management System,
IoT system able to manage autonomously Type 1 Diabetes Mellitus patients
2022
- 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,
IoT system able to monitor remotely the environment of a home for elderly
2021
- **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**

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