Job Position N

Research grants at University of Verona in development of wearable devices

Contracts duration: 1 year with possible future positions in industry.

Description

Applicants are invited for a research grant at the Department of Computer Science of University of Verona beginning June 2018, to be funded by two private companies named Wagoo LLC and Wagoo Italia srls (<u>www.wagooar.com</u>).

Augmented reality technologies for eyewear and other wearable devices have traditionally required significant computational power to function. This comes as no surprise as positioning, connectivity, orientation, direction, and image capture (and recognition) technologies all serve to drain batteries more quickly. As such, processing and power constraints lead to larger form factors as well as more frequent recharging cycles. A solution has been validated using Wagoo LLC 's patented, multi-antenna eyewear system, having 3 or more integrated antennas. In such a system, users can more efficiently locate nearby objects of interest (e.g. people via Bluetooth enabled smartphones or objects via iBeacon technology). This solution, is based on common radio emission modules such as Bluetooth Low Energy, and consequently requires less hardware, connectivity, and power.

We are looking for passionate and eclectic people with a hunch for pushing the frontiers of cutting edge technologies beyond the status quo. We need people who want to grow quickly and are not scared of tackling new problems with creativity, determination, and a constant learning attitude.

Candidates requirements

We require a general knowledge of as many of these areas: C based programming, Objects-Oriented Programming, Concurrent Programming, Operating Systems, Data Networks, Wireless Networks, Microcontroller Programming, Low Power Firmware, Sensors and Radio Interfaces, Bluetooth Radio Standard.

Profile 1: embedded systems

Development & optimization of smart embedded system including network firmware, CPU, memory, bus, Bluetooth Low Energy RX-TX, Power Supply, Antennas & RF Components.

Topics: Embedded Programming, Electronic Systems Design, RF Propagation.

Profile 2: data algorithms

Development & optimization of algorithms for auto-calibration. Development & optimization of algorithms for directional navigation in iBeacon-equipped environments.

Topics: Statistical Analysis, Machine Learning, System and Control Theory, BFS and Graph Theory.

Profile 3: web applications

Development & optimization of end-to-end mobile app. for wearable devices and integration with social networks.

Topics: iOS and Android programming both native and hybrid, JavaScript, JSON, No-SQL Databases & REST.

Contract details

The successful candidates will join the Department of Computer Science of University of Verona. They will have the opportunity to collaborate with national and international partners from both academia and industry.

Applications should be sent by email (all documents in English) to the contact below, and include:

- the CV with a summary of the previous activity in either research or development
- the motivation letter (max 1 page)
- contact details for two references

Contact details

Davide Quaglia email: davide.quaglia@univr.it