

Diploma projects 2018/2019

1. Precision agriculture demo using Open Garden Outdoor Platform from Cooking Hacks
 - a. Position available: 1 student
 - b. Requirements: hands-on experience with Arduino (for building the kit and programming), web/mobile programming skills, ability to work independently, with minimal supervision.
 - c. Description:
 - Learn about precision agriculture and wireless sensor nodes
 - Build a demo case using Open Garden Outdoor Platform (1Gateway, 2 Nodes and Weather Station WS-3000)
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2. Visual programming environment (web-based and/or mobile) for junior programmers using low-cost Arduino-based robot kits
 - a. Position available: 2 students
 - b. Requirements: hands-on experience with Arduino or similar platforms (for building the kit and programming), web/mobile programming skills, ability to work independently, with minimal supervision.
 - c. Description:
 - Build and customize Arduino-based robot kit
 - S4A programming (<http://s4a.cat/>) integration
 - Design a visual interface (web-based and/or mobile) for robot's commands easy to use by junior programmers
3. Mobile app for visual recognition for coins and banknotes
 - a. Position available: 1 student
 - b. Requirements: mobile app programming skills, ability to work independently, with minimal supervision.
 - c. Description:
 - Design and program a mobile app (Android or iOS)
 - Coins and banknotes recognition (for example Google Cloud Vision, IBM Watson Visual recognition)
 - Cloud integration (Google, Amazon or Microsoft services)
 - Ebay search integration
 - Reports
4. Software Defined Networks (SDN) applications
 - a. Position available: 1 student
 - b. Requirements: computer networks knowledge, programming skills (Python), ability to work independently, with minimal supervision.
 - c. Description:
 - Learn about network programmability and Software Defined Networks
 - Deploy, configure and manage a Cisco APIC-EM
 - Create tutorials and apps using Cisco Application Centric Infrastructure (ACI)

The desired topic subject together with a CV must be sent to the following email address: bogdan.iancu@cs.utcluj.ro