

Automotive Virtualization Intern

Internship reference: VOSYS_2017_IN_004

Starting date and duration: February – September (2018), July - February(2017-2018), July - September(2018) (6 months)

Type of contract: Full time internship

Monthly salary: 1100€ gross salary

Work location: Grenoble (Rhône Alpes), France

Description and objectives:

Virtual Open Systems, a French virtualization start up active in many European research projects, proposes internships in the area of automotive Electronic Control Unit (ECU) virtualization. The students will benchmark and extend current state of the art technologies (e.g., KVM, ARM TrustZone, GlobalPlatform TEE, ARM Trusted Firmware) in order to implement a mixed criticality solution able to run on the same hardware real time tasks (Advanced driver assistance systems - ADAS, Powertrain functions, etc) along with infotainment virtual machines and applications (maps, Android, Linux, etc.).

This internship includes both research and development activities, targeting to benchmark and enhance the open source Automotive Grade Linux (AGL) distribution with support for Docker Containers and Unikernels.

Activities:

- Development of AGL Linux Yocto extensions to support Docker containers and Unikernels
- Benchmark of the AGL Linux performance
- Interactions with the open source Automotive Grade Linux (AGL) community
- Scientific paper dissemination

Required skills:

- TrustZone and Virtualization concepts understanding (QEMU, KVM, paravirtualisation)
- Linux distributions - experience with bash, CentOS, Ubuntu
- Real Time systems, FreeRTOS
- Linux kernel (driver development, cross-compilation, etc.)
- programming languages - C, Assembly, Python

How to apply

Any application (resume+cover letter preferably in PDF format) should be sent by email at the following address : contact@virtualopensystems.com