JOB OFFER

Title: Embedded Software Engineer

1   UNIVERSITY SPACE CENTER OF MONTPELLIER

The University Space Center of Montpellier (CSUM) is the French leader in the development and operation of nanosatellites developed by students. It has acquired in-depth competences in the field of design, manufacturing, testing and operation of nanosatellites and their subsystems, as well as in the area of space project management and product assurance in the framework of university space projects. The CSUM has an AIT (Assembly Integration and Test) Facility, a CDF (Concurrent Design Facility) and both UHF and S-band Ground Stations. The CSUM develops its own 1U and 3U CubeSat nanosatellite platforms with the support of the Van Allen Foundation and both the French and the European space agencies.

2   JOB DESCRIPTION

We are looking for an engineer with a broad skillset to cover development and validation with an emphasis on embedded software skills.

You will be joining CSUM's core team in Montpellier (France) and will be responsible to develop applications and services which will run on our satellites. The work involves tight interaction with the satellite development team and mission operations. The work will involve developing the firmware for microprocessors that will run on our satellite's subsystems.

Development work will require using Linux on a day-to-day basis. Experience working with kernels (e.g. Linux, FreeRTOS, etc), drivers, filesystems, and embedded platforms is a big plus.

At CSUM, we speak English, but if you speak French, that is a bonus!

Main Tasks:

- Architect, design and implementation of high reliability and robust software

- Responsible for planning and implementing agreed test strategies during development.

- Conception and definition of test procedures, test plans and test strategies in alignment with design.

- Creation and execution of tests on demand from analysis, requirements.

- Provide design feedback according to testing results.

- Provide support to the satellite operations team.

Skills, attitude and experience:

- Experience with C (advanced)

- Proficiency with GIT.

- Strong experience in embedded software development required including involvement in various technical areas such as signal processing, real-time software, Linux kernel, Android framework (AOSP), mobile applications and system boot software
- Experience in software studies, architecture, development, validation (using debug tooling system)
- Excellent knowledge using an integrated development environment (IDE) and compilation technology

Bonus Skills:

- Familiarity with tools for programming and debugging Texas Instruments' microcontrollers.
- Experience with continuous integration and unit testing tools.
- Experience with FreeRTOS.
- Familiarity with CSP (Cubesat Space Protocol).
- Familiarity with CAN BUS protocol.
- Familiarity with CCSDS communications protocols/frames (CLTU, CADU, etc).
- Familiarity with Bash, Python.
- Experience developing hard real-time systems.
- Experience working with FPGA soft-cores (Xilinx).

Location: Montpellier - France

Preferred starting date: As soon as possible

Duration: 1 year (CDD)

Supervisor, Function at CSUM: Benoit Heinz - Engineer

3 CONTACT

Please upload your application at https://csu.edu.umontpellier.fr/en/job-offers-internship/