

Spacecraft Engineer (Embedded Systems) at STAR@NUS

The Satellite Technology and Research Centre (STAR) focuses on building miniaturized satellites that could fly in multiples for formation and constellation flying. It is envisioned that this will open out new potential applications such as collaborative sensing for the environment, more timely and scalable communication services. Satellite mission of these applications will in general require advanced technology such as active propulsion control of the satellites, highly precise inter-satellite navigation, advanced attitude control etc.

Satellite software at STAR features the development of Flight Software (Microcontroller/FPGA based subsystems) and Ground Software (Mission Control and Test GUI), adapted for use in different mission requirements of each programme. We are looking for passionate Embedded Systems engineers for Flight Software to join our team, bringing innovative ideas and solutions to our satellite programs.

About the job

- Pioneer embedded software development for mission critical systems in spacecraft
- Participate in spacecraft SDLC and ensure quality through design, coding, and testing
- Solve problems across our multidisciplinary team to ensure smooth integration of satellite subsystems
- Innovate and explore potential upcoming embedded system technologies for satellite applications

What we look for

- Bachelor or Master degree in Engineering from a reputable university
- Experience in designing embedded systems. Fresh graduates are welcome to apply
- Highly skilled in microcontrollers with strong programming experience in C
- Adept in RTOS for mission-critical systems with proficiency in peripherals (CAN, SPI, I2C, UART)
- Comprehensive knowledge of using development tools (analysers and oscilloscopes) and software IDEs
- Basic understanding of hardware and ability to read schematics
- Familiar with Git and Jenkins
- Experience in FreeRTOS, FPGA (VHDL/Verilog), Java or Python is a plus
- Team-oriented individual with good inter-personal skills
- Fluent verbal and written communications in English

Benefits

- Participate in the development of satellite projects at a world-class research facility
- Be involved in a multi-disciplinary program, conducting research/engineering work from concept to space-qualification.
- Exposure to spacecraft design and testing based on NASA/ESA standards.
- Opportunity to pursue a Master or PhD degree concurrently part-time
- Opportunity for external training in relevant skillsets

Interested applicants may send their resume via email to:

Satellite Technology and Research Centre (STAR)

star@nus.edu.sg