

Job Title: Digital Signal Processing Engineer

Requisition ID: 43434

All Locations: El Segundo, CA (California)

A trusted partner. A national resource. A leader in national security space. We are THE Aerospace Corporation. A team that takes pride in our readiness to solve some of the most complex technical challenges in existence. With challenges spanning government to commercial, you'll have the unique opportunity to work on projects that are literally evolving our nation's space and launch capabilities. We all share a common passion and aspiration – to serve a mission much bigger than ourselves. When you join our team, you'll be part of a rare collection of thought leaders and game-changing innovators. Are you ready to launch your career?

Responsibilities

The Aerospace Corporation's Digital Communications Implementation Department uses software-defined radio and FPGA technology to design digital transceivers and prototypes of novel DSP algorithms. We conduct our own research and development and in this position, you can have the opportunity to innovate in algorithm design.

Key Functions

- Design and prototyping of digital communication systems, GNSS receivers and/or alternative navigation techniques in software radio
- Simulation and analysis of signal processing performance using Python
- Research pertaining to novel signal processing algorithms, RF spectrum classification, and spectrum sharing
- Implementation of software and FPGA hardware for various sensors and communication systems deployed on small-form-factor satellites (CubeSats)
- Candidate will work on a diverse set of projects. It is very important to be hands-on, willing to learn and be comfortable in working in an environment with engineers of diverse backgrounds and expertise.

Qualifications

Required

- Master's degree from an accredited university in Electrical Engineering, Computer Science or a related field
- 0-1 year of professional engineering experience
- Proficiency with one or more of the following: C/C++, Python, VHDL/Verilog
- Understanding in an area of digital signal processing, digital communications, GNSS/GPS positioning and navigation, or alternative navigation techniques
- Experience troubleshooting digital hardware designs in the laboratory
- Strong written and verbal communication skills
- This position requires the eligibility to obtain and maintain a security clearance, which is issued by the U.S. government. U.S. citizenship is required to obtain a clearance

Preferred

- Experience using GNURadio, USRPs, and the RFNoC framework
- Experience implementing FPGAs using Vivado and VHDL/Verilog
- Experience programming GPUs
- Experience with DSP algorithm design and implementation
- Experience with RF lab equipment (spectrum analyzers, network analyzers)

Transcript Requirement

Transcripts are required for this position.

Additional Requisition Details

Clearance Requirement: Secret

Access: None

Polygraph: None

Relocation Available: [[relo]]

Employment Type: Regular

Work Schedule: Full Time

Company Statement

The Aerospace Corporation has provided independent technical and scientific research, development, and advisory services to national security space programs since 1960. We operate a federally funded research and development center (FFRDC) for the United States Air Force and the National Reconnaissance Office, and support all national security space programs. We also apply more than 50 years of experience with space systems to provide critical solutions to technologically complex systems in such areas as communications, shipping, law enforcement, and cyber, among others.

From our inception, our highly skilled technical staff has focused on ensuring the success of every mission and developing the most effective and economic space-related hardware and software in the world. Our greatest asset is the technical expertise of our people. Our state-of-the-art laboratory facilities are staffed by some of the leading scientists in the world.

All Aerospace employees working in organizations with technical responsibilities are required to apply for and maintain at least a Secret clearance. U.S. citizenship is required for those positions.

Equal Opportunity Commitment

The Aerospace Corporation is an Equal Opportunity/Affirmative Action employer. We believe that a diverse workforce creates an environment in which unique ideas are developed and differing perspectives are valued, producing superior customer solutions. All qualified applicants will receive consideration for employment and will not be discriminated against on the basis of race, age, sex (including pregnancy, childbirth, and related medical conditions), sexual orientation, gender, gender identity or expression, color, religion, genetic information, marital status, ancestry, national origin, protected veteran status, physical disability, medical condition, mental disability, or disability status and any other characteristic protected by state or federal law. If you're an individual with a disability or a disabled veteran who needs assistance using our online job search and application tools or need reasonable accommodation to complete the job application process, please contact us by phone at 310.336.5432 or by email at ieo.mailbox@aero.org. You can also review The Equal Employment Opportunity is the Law poster and the supplement, as well as the Pay Transparency Policy Statement.