GUIDANCE, NAVIGATION AND CONTROL SPECIALIST
DRONE SYSTEMS

NGC Aerospace is currently looking for a Guidance, Navigation and Control Specialist, who will be primarily responsible for the analysis, design and validation of guidance, navigation and control (GNC) algorithms and embedded software for unmanned aircraft (UAVs), integration with other hardware and software components, and associated software development.

You are passionate about drones and innovation? This is the challenge for you!

Your main responsibilities, as Guidance, Navigation and Control Specialist :

- Design and implement, using MATLAB/Simulink and C/C++ :
  - aircraft guidance, navigation and control;
  - software for simulating the dynamic behavior of aircraft, including sensors, actuators and various aircraft peripherals;
  - tools for analysis;
  - system identification;
  - control synthesis;
- Identify and integrate required hardware components, including sensors and on-board computers;
- Analyze and validate systems using numerical simulations of operational environments, dynamic tests in controlled environments and field tests (flight tests on remotely piloted aircraft);
- Model complex physical systems and develop associated simulators;
- Implement software in a real-time environment;
- Develop software tools to consolidate company efficiency and improve product quality;
- Optimize Simulink models to automatically generate efficient C code;
- Conduct research and development studies;
- Support the preparation of responses to calls for tender and project management tasks.

The NGC Benefits :

- The opportunity to work for a well-established, world-class company;
- The opportunity to work with a talented team and a management team open to sharing creative ideas and innovation;
- The joy of living in the Eastern Townships, a region that offers a balanced lifestyle close to nature;

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- Opportunities for professional development through various internal initiatives, conferences and technical training courses;
- Flexible working hours with the possibility of working from home;
- A group insurance plan with a 50% employer contribution;
- Employer contribution to your personal or group RRSP at 5% of your annual salary;
- Lively initiatives from our social club and sports committee to elevate our work environment;
- Access to an on-site training room reserved for employees (with changing rooms and showers), and to a community garden in summer.

Key requirements for the role :

- Bachelor's degree in electrical, mechanical, computer, software or aerospace engineering, or equivalent;
- Three years' experience in software design and programming, in an aerospace environment;
- Knowledge of (and passion for!) the design, validation and operation of UAVs and airborne systems in general;
- Proficiency in the MATLAB/Simulink environment;
- Knowledge of programming languages (C/C++, Python);
- Ability to talk about drones, Kalman filters and algorithms;
- Proficiency in one or more of the following areas : drone operating procedures in accordance with Transport Canada regulations, automatic control theory, navigation, dynamic modeling;
- Effective communication with colleagues, customers and partners;
- Organizational skills, autonomy, rigor and high technical competence;
- Ability to manage multiple tasks on different projects at the same time;

Assets :

- Experience with software development, validation and verification processes and tools;
- Unmanned aircraft systems pilot certificate;
- Master's degree in a related field relevant to the position;
- Knowledge and experience of software quality best practices (RTCA DO-178B/C and MISRA compliance) and MATLAB Embedded Coder;
- Member of the Ordre des ingénieurs du Québec (or eligible to become a member);
- Experience or interest in space systems.

Ready to propel your career with us? Send your application now to career@ngcaerospace.com and discover how you can let ingenuity, knowledge and collaboration guide your career!

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