



JOB POSTING: effective immediately

### **Company Information**

SySense Incorporated is a small engineering research & development company, founded in March of 2001 by a group of engineers from UCLA. Currently, all of our engineers hold advanced degrees, many with PhDs in fields related to guidance and control.

Our primary sources of revenue are contracts with Federal government agencies and commercial companies. These are consulting and R&D contracts in the field of aerospace guidance, navigation, and control systems. We have become a leading provider of real-time fault-tolerant navigation, guidance, and control systems for aerospace applications. Our high-precision solutions have been used in many applications from the first Autonomous Formation Flight (AFF) project in 2001 to the System F6 Project in 2010. In addition to our relative navigation solutions, SySense, Inc. has also developed a suite of guidance and fault detection algorithms for a variety of aerospace applications. Recently, we coded Matlab® Simulink® blocks to perform data acquisition, sensor fusing, and fault detection on test range data. A recent SBIR award focuses on the development of a smartphone application to fuse all the sensor data onboard the phone itself for a new functionality.

We expect to continue such R&D relationships with government agencies and prime defense contractors for the foreseeable future. In the next few years, we also expect to develop and market software and hardware products derived from our years of R&D experience in the field of sensor fusion and relative navigation, guidance, and control.

### **Position Description and Requirements**

SySense, Inc. is seeking full-time engineers with experience in a variety of coding languages, but in particular Matlab®, C, C++, and Java. Experience with aircraft and spacecraft dynamics, system control theory, estimation theory (such as Kalman filters), and simulation development is strongly desired.

Primary duties will depend on the candidate's education and experience. Permanent residency and the ability to obtain Department of Defense security clearance is required. U.S. Citizenship is desirable.

Our working environment is highly dynamic, and the candidate should be aware that they are not applying for one particular project with specific requirements. There is a need for the engineer to be flexible and have skills applicable for other software and hardware development projects.

The work environment is flexible (in terms of schedules) and collaborative. An engineer may need to coordinate efforts with other engineers or, at times, may be required to work independently. It is therefore important that candidates possess strong communication and teamwork skills.

SySense, Inc. is currently focused on research & development work, so the candidate must possess analytical skills necessary to comprehend and advance theoretical developments in the field of estimation and control theory, specifically in relation to guidance, navigation, and control of aerospace vehicles as well as GPS systems. Skills are also desired in applying these theories to applications both in simulation and hardware.

SySense, Inc. currently has three levels of engineers:

***Senior Research Engineer***

This position is for engineers with a doctorate of philosophy (PhD or equivalent) in a relevant field of study, such as (but not limited to) mechanical engineering, electrical engineering, computer science or applied mathematics.

Senior Research Engineers are expected to serve as principal investigators on R&D contracts and as the primary point of contact to customers. They are to function as project leaders while also performing the technical development. They are also expected to assume lead roles in writing reports and proposals. Responsibilities and expectations will be commensurate to the candidate's experience level, but there is an expectation that all Senior Research Engineers will eventually manage several concurrent projects.

***Research Engineer***

This position is for engineers with a master's degree (or equivalent) in a relevant field of study, such as (but not limited to) mechanical engineering, electrical engineering, computer science or applied mathematics.

Research Engineers' primary function is to conduct the technical development of R&D contracts. Depending on the skill and experience level of the Research Engineer, they may serve as the project lead on certain contracts and may serve in a similar capacity to a Senior Research Engineer. Research Engineers may also work under the supervision of a Senior Research Engineer. Responsibilities and expectations will be commensurate to the candidate's experience level, and Research Engineers may participate in several projects at the same time.

***Associate Research Engineer***

This position is for engineers with a bachelor's degree (or equivalent) in a relevant field of study, such as (but not limited to) mechanical engineering, electrical engineering, computer science or applied mathematics.

Associate Research Engineers' primary job function is to conduct the technical development of R&D contracts, under the general supervision of Research Engineers or Senior Research Engineers. Responsibilities and expectations will be commensurate to the candidate's experience level. Associate Research Engineers may work exclusively on one project or may be required to participate in several projects, depending on operational requirements.

**Benefits**

SySense, Inc. offers competitive salary with a benefits package that includes vacation, holiday and sick pay, transportation fringe benefits, a 401(k) retirement plan with matching contributions, and medical, dental and vision insurance.

**Contact**

All interested candidates are encouraged to submit a resume for consideration to [careers@sysense.com](mailto:careers@sysense.com) or by FAX to 310-322-7973 (cover page required). Transcripts may be submitted but will not be reviewed in lieu of resume. Submissions will be accepted until August 31, 2012.