





**Faculty Member Contact Information**

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**3 Unfunded URCA Assistants**

	This position is <b>ONLY</b> open to students who have declared a major in this discipline.	<b>M</b>
	This project deals with social justice issues.	
	This project deals with sustainability (green) issues.	
	This project deals with human health and wellness issues.	
	This project deals with community outreach.	
<b>X</b>	This mentor's project is interdisciplinary in nature.	<b>I</b>

**Are you willing to work with students from outside of your discipline? If yes, which other disciplines?**

- Yes

**How many hours per week will your student(s) be required to work in this position?**

(Minimum is 6 hours per week; typical is 9)

- 9

**Will it be possible for your student(s) to earn course credit?**

- No

**Location of research/creative activities:**

- Engineering Building

**Brief description of the nature of the research/creative activity?**

The purpose of the project is to learn the application programming interface (API) for the Boston Dynamics robot dog. This will entail working with the python-based API to program the dog to identify an object using the front-facing camera and then walk towards the object identified.

**Brief description of student responsibilities?**

The URCA Assistant will participate in the development of python-based software to control the robot dog in a pre-programmed set of tasks, ideally as described above – i.e. to identify an object and then walk towards the object. Prototyping will be done in python and GitHub will be used for revision control.

**URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?**

By the end of the experience, the student will be able to:

- 1) Develop research software in a scientific-computing environment
- 2) Implement basic image recognition algorithms
- 3) Use source-code control systems, a critical skill for an engineer working in product development

**Requirements of Students**

**If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours) please indicate all required days and times:**

- There are no set times necessary and the schedule can accommodate the student.

**If the location of the research/creative activities involves off campus work, must students provide their own transportation?**

- There are no transportation requirements necessary.

**Must students have taken any prerequisite classes? Please list classes and preferred grades:**

- There are no specific prerequisite classes for this position.

**Other requirements or notes to applicants:**

- The ideal applicant will have experience with Python and GitHub

