INTUITIVE.

Job Description

Job Title: **Computer Vision / AI Intern**
Department: **Applied Research**
Reports to: **Manager, Applied Research**
Location: **Sunnyvale, CA**

Company Description:

Intuitive Surgical designs and manufactures state-of-the-art robot-assisted systems for use in minimally-invasive surgery. These systems are revolutionizing the way in which surgery is being done and offer a unique platform—that is being used routinely at hospitals worldwide—for exploring the potential of intelligent surgery. Joining Intuitive Surgical means joining a team dedicated to using technology to benefit patients by improving surgical efficacy and decreasing surgical invasiveness, with patient safety as our highest priority.

Eligibility:

Must be concurrently enrolled in a degree-seeking program with an accredited university or enrolled in an upcoming program.

Primary Function of Position:

We are seeking a self-motivated intern to support the Applied Research team in projects focused on Computer Vision, Deep Learning and Image/Video Analytics and contributing to new technology development in the area of 3D scene understanding/reconstruction and spatial AI systems for next generation robotic surgery platforms. This role is an exciting opportunity to join a newly formed team and contribute to its future growth and it will give you an opportunity to test your knowledge in a challenging problem solving environment.

Roles and Responsibilities:

The intern will:

- Research, design and implement algorithms in deep learning for computer vision and image analytics
- Contribute to research projects that develop a variety of algorithms and systems in computer vision, image and video analysis
- Develop new and/or improve previously developed video/image semantic segmentation methods
- Work with an existing vision and ML data pipeline and toolset and improve aspects of it
- Analyze and improve efficiency, accuracy, scalability and stability of currently developed systems

Skill/Job Requirements:

- Graduate-level study in computer science, electrical engineering or robotics with emphasis on computer vision and machine learning.
- Experience building systems based on machine learning and/or deep learning methods.
- Strong hands on C++/Python/Matlab skills.
- Strong hands-on experience with deep learning frameworks such TensorFlow, PyTorch, and Caffe.
- Good hands on experience with a few of the state-of-the-art deep learning models for image/video understanding and pose estimation.
- Good hands on experience with computer vision algorithms and libraries.
- Self-starter and able to work in a collaborative and results oriented environment.

Learning Outcomes:

- Develop, build, and test prototypes in an industrial research environment.
- Gain experience building learning systems based on a very unique clinical dataset (RGB-D and video) and application
- Gain experience with integration of CV/ML algorithms with robotic platforms
- Gain experience with state of the art 3D sensing technologies/systems/algorithms
- Gain hands-on experience with a robot-assisted surgery platform while integrating and testing prototype technologies.
- Gain experience working with data-sets from clinical settings.

Commitment: Must be available to work full-time hours, M-F for 12-14 weeks beginning anytime in between January and June 2020. We are an AA/EEO/Veterans/Disabled employer.