



**Job Title:** Software Engineer

**Position Code:** 1534

**Reports To:**

**FLSA Status:** Exempt

### Job Summary:

Advanced Construction Robotics is seeking a Software Engineer at our Allison Park, PA location. ACR is a world-leading innovator of autonomous robotic equipment. Our robots are transforming the construction industry by filling the skilled labor gap and increasing overall productivity of one of the largest industries by revenue. Our products give construction firms the ability to meet a rapidly growing demand. At ACR, we strive to push the boundaries in creating tomorrow's solutions today. We are on the hunt for experienced, creative, and energetic software engineers looking to make an immediate impact through robotics. You will see your code working on real products doing real work on real construction jobsites. If that's you, apply today!

### *Supervisory Responsibilities:*

None

### *Duties/Responsibilities:*

- Design and implement new software components for existing fleet of robot construction machines and future products.
- Validate and evaluate the performance of software via unit tests, simulation, logged data analysis, and full-scale system integration tests.
- Generate and maintain design documentation ranging from system requirements through in code comments.
- Participate in engineering peer review of proposed designs and code.
- Support other departments with fielded robot fleet and production of new robots.
- Other related duties may be assigned.

### *Required Skills/Abilities:*

#### Required

- Strong computer science fundamentals including data structures and algorithms.
- Proficiency in modern C++ and Python.
- Functional understanding of Linux development in real time, distributed systems.
- Familiarity with robotics frameworks and middleware like ROS.
- Practical experience with development and integration of robotics software components in domain areas such as perception, localization, mapping, planning, and control.
- Professional software engineering habits around design, documentation, and testing of components.
- Self-motivation and flexibility around solving problems and learning new skills.

3812 William Flinn Highway, #3h | Allison Park, PA 15101

### Preferred

- C++14 or newer standards.
- Open source software: ROS runtime and build system, OpenCV, PCL.
- Robotics algorithms: computer vision (such as filtering, edge detection, segmentation, pose estimation, object recognition, visual odometry), SLAM, robot kinematics, sensor calibration, trajectory control and planning, hybrid control, force control, machine learning.
- Sensors: Camera, IMU, lidar.
- Interfacing: CAN, ethernet, WiFi, IP, TCP, UDP, EtherCAT.
- Embedded software: C for RTOS and bare metal microcontroller targets.
- Distributed version control: Git, Mercurial.

### *Education and Experience:*

- 2+ years of experience in robotics or related fields.
- Bachelor's degree in computer science, computer engineering, software engineering or a related technical field, or equivalent experience is required.

### *Work Environment:*

- Works both indoors and outdoors.
- Environment can be dirty and noisy.
- Wears appropriate protective clothing and equipment including gloves, ear protection when required.

### *Physical Requirements:*

- Prolonged periods sitting at a desk and working on a computer.
- Sits, stands, and walks about the work areas.
- Occasionally stretches up and across when completing daily tasks.
- Squatting, crouching or kneeling may be required occasionally.
- Twisting the body or neck may be required occasionally.
- Bending is occasionally required to facilitate the lifting of items used daily.
- The employee must be able to perform the physical demands of the job with or without reasonable accommodation.

### *Special Note:*

This job description is presented as guidance only, other reasonable tasks or responsibilities as management sees necessary may be added to this job description in order to achieve satisfactory job performance by the team member.

### *EEO Statement:*

Brayman and Affiliate Companies are Equal Opportunity Employers and all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, sexual orientation, gender identity, age, national origin, genetic information, disability, veteran status or on any other basis prohibited by federal, state and local laws.