

# Software Engineer (Computer Vision & ML)

## ARC Student Project - Mobile ARCAM - Volunteering Position

The Autonomous River Cleanup (ARC) is a student-led initiative supported by the Robotic Systems Lab with the goal of removing riverine waste. By joining the **Mobile ARCAM project**, you will contribute to ARC's newest endeavor, where we aim to develop an improved river waste monitoring system using a mobile phone at its core. By using a mobile phone, we want to take advantage of its camera, processing power, communication capabilities, and compactness. With this project, we want to build a simpler, cheaper, and more scalable monitoring system to deploy at several bridge locations.

### Your role:

During your time at ARC, you will do the following:

- Develop algorithms and train Machine learning models for the detection of riverine waste
- Build an efficient pipeline that can run on a mobile device
- Interface with other parts of the project, such as server connection and front-end
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### Your skills and background:

Ideally, you already have the following skills or are eager to learn them:

- Know-how in Machine Learning and Object Detection
- Development of mobile applications
- Classical computer vision (e.g., Object Tracking, Optical-Flow, etc.)
- Experience with git and version control

You do not need to be an expert yet, but you are willing to become one!

### Expectations:

As a team member, we expect you to:

- Be proactive and take responsibility for your work
- Participate in team meetings and workshops
- Take ownership of your projects and tasks
- Collaborate closely with your team

### What do you receive?

By participating in this unique opportunity, you will:

- Expand your knowledge and gain hands-on experience on a project outside of the classroom
- Establish and grow your professional network and engage with people from academia
- Be part of a friendly community, grow as a unit, and build friendships
- Do something meaningful for our natural environment
- Receive support and guidance from current team members
- Kickstart your career!

**Project start:** as soon as possible

**Duration:** 2 semesters (spring 2024 & autumn 2024)

**Working hours:** 8 hours/week

Please be informed that your work, as part of a student project, will be entirely voluntary and does not offer any payment. However, you will be able to prove your practical experience in your CV and have access to a vast infrastructure to realize your ideas.

### Interested? Any questions? Get in touch!

We look forward to hearing from you! For the application, please specify why you are interested in the project and include your CV. Please reach us at [arc@ethz.ch](mailto:arc@ethz.ch).