## Judo – Web Service for Traffic Micro-Simulation

**Project Description:** Judo is a web-based traffic micro-simulator that utilizes a parallelized version of SUMO (a widely used open-source multi-modal traffic simulation package) that was developed by QCRI called qarSUMO. The system aims to fill the gap in the market for usable web-based microsimulation systems, leveraging the open-source SUMO platform to provide accurate traffic simulations. With its unique combination of web-based accessibility and robust microsimulation capabilities, Judo is poised to become a valuable tool for transportation planning and analysis.

**Project Type:** Engineering

Internship Batch: Batch 1 from May 7 to June 29

## **Duties/Activities:**

You will work closely with a team of experienced software engineers to develop and enhance visualization features on our interface using cutting edge web visualization technologies. As an intern, you will have the opportunity to contribute to several extensions, such as showing a helicopter view of the entire landscape while working on a specific region of the network and adding additional interactivity tools like lane-names and junctions. This is a great chance to gain practical skills and make a real impact in the industrial scale solutions.

**Required Skills:**, Experience with REST API, React or Angular, Experience with web-based visualization toolkits/ libraries, Willingness to learn new technical skills, good team player

Preferred Intern Academic Level: Year 3 or 4 in Undergraduate / Masters / PhD

Learning Opportunities: Data visualization libraries, Building REST API, Building React/Angular frontend

**Expected Team Size:** 1-2 members.

## **Mentors:**

Mus'ab Hussaini mhusaini@hbku.edu.qa

Ahmad Khan mukhan2@hbku.edu.qa

Ahmad Musleh ahmusleh@hbku.edu.qa

Ummar Abbas: uabbas@hbku.edu.qa