

## IT CAPSTONE PROGRAM 2020 PROJECT REGISTRATION FORM

As part of QUT's Bachelor of Information Technology degree, students are required to undertake capstone project units in their final year of study. The students have an opportunity to apply what they have learned during their degree and develop professional project management and team skills as they work through an industry project challenge from concept to completion.

The QUT academic supervisor is responsible for the selection and/or approval of students for participation in each project. The role of the QUT academic supervisor is also to support, guide and advise students throughout the term of the project and manage the assessment.

Please return this form to: [Nicola.Bartlett@qut.edu.au](mailto:Nicola.Bartlett@qut.edu.au), IT Industry Liaison, Contact 0466 504 937

### YOUR ROLE AS THE INDUSTRY SUPERVISOR

- Communicate with our QUT academic supervisor to establish a project brief to meet the students' curriculum and skills sets
- Be involved with the project scope and assessment requirements
- Provide relevant policies, documents, information and literature to underpin the project to assist students to develop a greater understanding of your Organisation and the issue being explored.
- Provide feedback to QUT and students on their project progress, processes and outcomes
- Give project guidance and supervision – a minimum of one hour per week or two hours per fortnight.
- Arrange site visits for students as necessary or beneficial for the project, as required.
- It is optional to attend the short student presentations at the end of each semester.

### INDUSTRY PARTNER KEY CONTACT DETAILS

<b>Industry Partner</b>	Organisation Name: Aurizon Address: 900 Ann Street, Fortitude Valley 4001 ABN: 47564947264
<b>Supervisor</b>	Name: Arn Nguyen Position Title: Enterprise Architect Business Phone: 0418 789 944 Business Email: <a href="mailto:declan.real@aurizon.com.au">declan.real@aurizon.com.au</a>

### PROJECT DETAILS

<b>Title of the Proposed Project:</b>	Leveraging Augmented Reality in an Operational Workforce
<b>Discipline Area of the project:</b>	Mobile application development; Virtual/Augmented Reality Application;

<p><b>Your Organisation:</b> A brief introduction to share your culture and personality – explain how the project fits with your overall vision and operations. Understanding the significance of the work and giving it a point of reference will help it resonate more with the student team.</p>	<p>Aurizon (ASX: AZJ) is Australia’s largest rail freight operator and a top 50 ASX company. Each year, we transport more than 250 million tonnes of Australian commodities — connecting miners, primary producers, and industry with international and domestic markets. We provide our customers with integrated freight and logistics solutions across an extensive national rail and road network, traversing Australia.</p> <p>Aurizon has been making recent strides in modern development practices and the adoption of leading-edge technologies to enable its workforce. It is an exciting time in Aurizon’s long history with respect to digital transformation and technology adoption.</p>	
<p><b>Project Description:</b> Outline project requirements and goals. Provide a breakdown of roles required to help us offer student teams with the right combination of skill sets.</p>	<p>Aurizon has various back-end systems which hold vital information around our assets both fixed and mobile. Serving this data to the edge (our front-line workers) is an ongoing challenge which has historically been solved with targeted mobile and kiosk applications which requires heavy training and doesn’t take advantage of newer hardware capabilities. The purpose of this solution is to leverage AR capable hardware (ideally consumer grade hardware like modern smartphones) to provide this information around our assets.</p> <p>The exact scenario to be confirmed however a few examples are listed below:</p> <ul style="list-style-type: none"> <li>• Based on image recognition of a car’s number plate, a driver can see key attributes such as owner, booking status and be able to place a booking.</li> <li>• View maintenance history and other key equipment details when pointing a phone at an equipment and reading it’s running number (number painted on the side of rail vehicles).</li> </ul>	
<p><b>Project Deliverables:</b> Eg.. Report, Presentation, Technical Specification</p>	<p>Aurizon would expect a documented design process, a functional application (prototyped but running locally) with the code to be stored in a git repo with any resources (databases) to be scripted for simple deployment. Enterprise data requirements can be based on stubbed in API assumptions rather than fully integrated with back-end enterprise systems.</p>	
<p><b>Time Commitment:</b> Please indicate your requirements for the project. Eg.. One day per week full time, and how you plan to engage with the students – onsite in your offices, or work remotely and catch up weekly/fortnightly, skype etc</p>	<p>Aurizon would expect meetings and project reviews with Aurizon stakeholders to occur on site. If the team are autonomous or don’t require desks to co-locate then students may work remotely. Also flexible with respect to the time commitment as this would depend on the team’s skills in getting up to speed and working as coordinated delivery pod.</p>	
<p><b>Project Term</b></p>	<p>Start Sem 1 2020</p>	<p>End Sem 2 2020</p>
<p><b>Required Knowledge and Skills:</b> A brief description of subject matter knowledge and skills required by the students undertaking this project.</p>	<p>Front-End Development skills Mobile development (framework &amp; hardware is not fixed) Awareness of AR Libraries (aka Apple ARKit or AR.js, argon.js) (framework also not fixed) UX and UI Design skills</p>	

<p><b>Intellectual Property</b></p>	<p>Please see the Attachment: QUT PDF Presentation IP and Confidentiality Agreements</p> <p>QUT offers a Project Partner Agreement to our industry partners to manage your requirements around workplace health and safety, intellectual property, confidentiality, indemnity and insurance for work experience arrangements.</p> <p>Aurizon will require each successful student to license or assign their individual Intellectual Property (IP) and sign a Confidentiality Deed. QUT recommends you take steps to ensure you understand the terms of any document relating to IP before you sign, which may include obtaining independent legal advice. Refer to the Student Project Process on SEF WIL Blackboard Community Site and the attached PDF for further information about IP and Confidentiality. Should you decide not to sign the IP and Confidentiality Deed, please advise the Capstone teaching team promptly to discuss project options.</p>
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