

# Course Overview

## *Software Architecture*

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*University of Queensland*



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- How to build software that is *scalable*

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## Lectures

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## Case Studies

## Practicals

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- Package software components into *Docker* containers
- Deploy containers to cloud platforms using *Terraform*
- Use cloud platform tools to *monitor* and *scale* applications

# *§ Assessment*

# Assessment

Cloud Infrastructure Assignment 40%

    API Functionality 10%

    Deployed to Cloud 10%

    Scalable Application 20%

Architecture Presentation 30%

Capstone Project 30%

(Delivering Quality Attributes Project)

# *Cloud Infrastructure*

1. Build a *RESTful web API* according to our specification
2. *Test* that the API satisfies the specification
3. *Deploy* the API to a cloud platform
4. *Scale* the API to handle *variable* and *high* loads

## *Capstone Project*

1. Teams will be allocated a project
2. *Design* and *implement* the project

# *Architecture Presentation*

- Team presents details of project architecture
  - *Everyone* presents
- *Individuals* present on different sets of questions
  - Compare and contrast with another architectural pattern
  - Pros and cons of architecture
  - Implementation characteristics of design
  - Potential security risks of architecture
- *Everyone* is expected to understand entire architecture
  - Questions can be directed to *anyone*

# AI

- Great tool for producing code
  - *Accuracy* is not so great
- *Hallucinates* about details of API spec
- Attempts to *rewrite* Learner Lab or UQ security policies
  - *Breaking* test runner
- Describe how you use AI in assignments
  - Include logs of AI tool history

# *§ You and Us*

# *Who are we?*



Richard Thomas



Thuy Dao



Millie Hughes



Zaidul Alam



Vy Ho



Nimesh Garg



Cameron Badman

*Question*

Who are *you*?

## *Course Website*

All course material is hosted on the course website

- <https://csse6400.uqcloud.net>

If you find any *errors* or wish to suggest any *improvements*,  
please submit a pull request on GitHub

- <https://github.com/CSSE6400/software-architecture>

# GitHub Username Registration Form: 6pm on Feb. 23<sup>1</sup>

You need access to the CSSE6400 organisation on GitHub

- *Practicals* – Access to code
- *Assessment* – Most submissions



<https://forms.gle/ukuiruE2Wt2k5xE89>

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<sup>1</sup>Yes, that is *today*