

# SIT315 Project



## Step 1- Identify a heavy computing problem

- Find the shortest solution for solving a rubik's cube
- IoT device simulator
- Near-real time situation monitoring in IoT ecosystem
- Near-real time recommender system

## Step 2- Propose a solution

- Parallel algorithm, Distributed computing, Microservices based solution with automatic scaling

- Step 3- Get approval from your tutor (By week 7)
- Step 4- Plan and start implementation
- Step 5- Evaluate the implemented solution
- Step 6- Record a demo video, and finalise the documentation (project scope, design, implementation and evaluation)
- Step 7- Submit

Distinction	High Distinction
Demonstrates proficiency with distributed and parallel programming concepts	All Distinction criteria
Try to solve a basic real problem	Demonstrates outstanding skills and/or knowledge of distributed and parallel programming concepts
Project satisfies basic constraints of a working prototype (e.g. requirements, thoroughly tested, etc.)	The system solves a real-world problem or seeks to address a research question in a specific context or domain
High quality documentation, and prototype demo video	Outstanding documentation, and prototype demo video
	Demonstrate a more complete prototype (i.e. more attention to design, functionality, etc.)

Distinction example	High Distinction example
Demonstrates proficiency with distributed and parallel programming concepts	Demonstrates outstanding skills and/or knowledge of distributed and parallel programming concepts
Monolithic architecture	Microservices architecture with auto scaling
Use global variables for communication between threads	Uses a message queue (e.g. Apache Kafka) for communication
Only support simulating fixed location devices	Can simulate moving objects
Write the simulated data in a csv file	Has the ability to publish simulated data over MQTT
Text-based UI	GUI