CAB432: Q&A Week 1

Introduction

Matthew McKague

The plan for today

- Overview of the unit
- Housekeeping
- Assessments
- Are you worried about Javascript?

Overview of the unit

Who is Jim Hogan and why is he in all the videos?

- Jim is the brand new Associate Dean of Learning and Teaching for Science (so he can't teach any more)
- Jim is *the* cloud expert in the CS school
- You can still get the advantage of Jim's expertise through his videos
- Matt and Jake are trying to fill some big shoes
- Jim is still around in the background guiding us

What is cloud?

Elastic utility computing at scale:

- **Utility**: pay for use, main infrastructure is elsewhere
- **Elastic**: services scale up and down with demand
- **Scale**: global, massive scale

Main themes

- **Statelessness:** allows scaling out (add more servers)
- **Persistence:** how to store data with stateless application?
- **Scaling:** how to add resources to keep up with demand

The cast

- **Matthew McKague:** Unit coordinator. Week 1, second half
- **Jake Bradford:** Co-Lecturer. First half
- Tutors:
  - **Michael Esteban**
  - **Alan Yu**
  - **Chad Gay**
  - **Hui Eng Law**

Weekly Schedule

- **Before Thursday:** Watch the lecture videos
- **Thursday:** Q&A sessions
- **Thursday and Friday:** Practicals
- Syllabus on Canvas has:
  - Weekly schedule
  - Tutorial times
  - Assessment item due dates

Practicals

- Come to any practical you like, and as many as you like
- If there isn't enough space, preference to those registered
- Your chance to work through the exercises and get help
- Two practical are assessed, in weeks 9 and 10
- Online practicals are *not* recorded

More about practicals

- Lots happening in the early pracs, later ones more about the big project
- Stay up to date. It is harder than you think, you need the time.
- Again, **give yourself time** and **start early**

Communications: Canvas discussions

Canvas Discussions:

- This should be your default choice for all content and housekeeping related questions
- Think of Canvas Discussions as something like Stack Overflow
- Not as searchable as we like, but working on a workaround
- You can communicate openly for most things. Everyone is doing their own thing, no worry about collusion

Communications: Email, Teams

Email:

- cab432@qut.edu.au to reach Matt, Jake and the tutors
- anything personal or otherwise specific to you

Teams:

- communicate with your partner, or more conversational stuff
- memes

Who is in this unit?

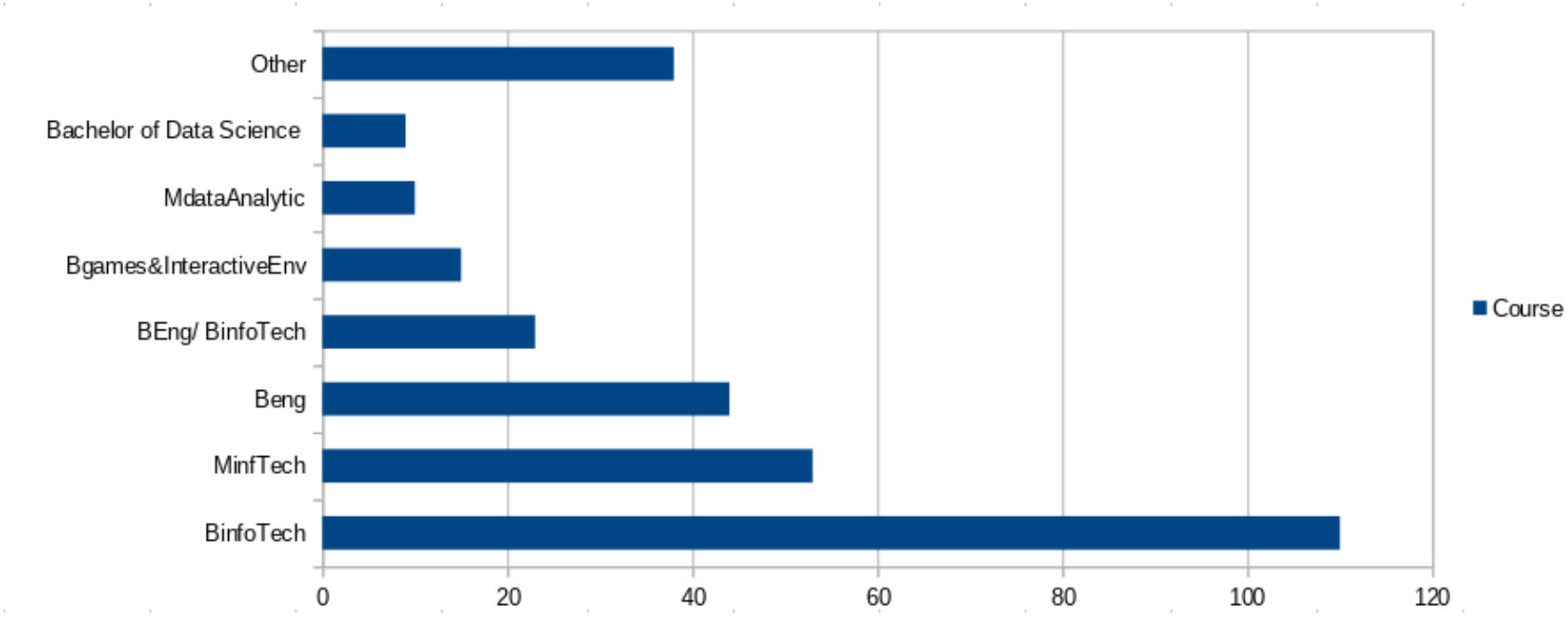

Figure 1: Enrolments by course

Javascript beginners

- At this point you should have a solid programming background
  - If you are a weak programmer, get in touch
- Should be mostly about learning the new syntax
- Early practicals and A1 geared to get you up to speed
- Early on, JS veterans will have an advantage, but that will go away

WWW beginners

Don't go out and learn React, Vue, Angular, etc. just for this unit.

- We don't really care about the front end
- You'll have lots of other stuff to worry about

AWS accounts

- QUT has a managed environment we will use for the pracs
- If you registered late then we will need to add you manually **cab432@qut.edu.au**
- Optional: AWS annual online conference https://aws.amazon.com/events/aws-innovate/apj/

Other clouds

- For main project you can use AWS, Azure or Google cloud
  - Some tutors have expertise in Azure
  - We won't be able to provide much support for google
  - Azure has free trial with no credit card, sign up with education email address
  - Google will want your credit card
  - Best to stick with AWS unless you have a good reason

Assessments

Assessment overview

- Mashup/docker project 30%
- Assessed pracs 10%
- Cloud project 60%

Everything is set up to get you ready for the Cloud project

Mashup/docker project

- Create a webapp using 2 or more public APIs
- Deploy using Docker
- Gets everyone up to speed on JS/Node/Express

Assessed pracs

- Persistence
- Scaling

These are here to get you practice with these things for the project

Cloud project

- Scalable load-balanced application deployed to a public cloud
  - AWS, Azure, GCP
  - Autoscaling, persistence
  - Eg. socials, data analysis, video transcode, image classification...
- Individual reflection
  - Honest appraisal of your project

More cloud project

- Individual or pairs (pairs recommended for workload)
- Multiple technical challenges
- Start thinking about it early
- Don't put off the pracs, they are the practice for the project

Code sharing, etc.

Yes, you can make use of:

- libraries
- code from Stack Overflow, github ...
- ChatGPT and other AIs

These are a normal part of modern software development. Just tell us in a comment in your code, or a note in your report.