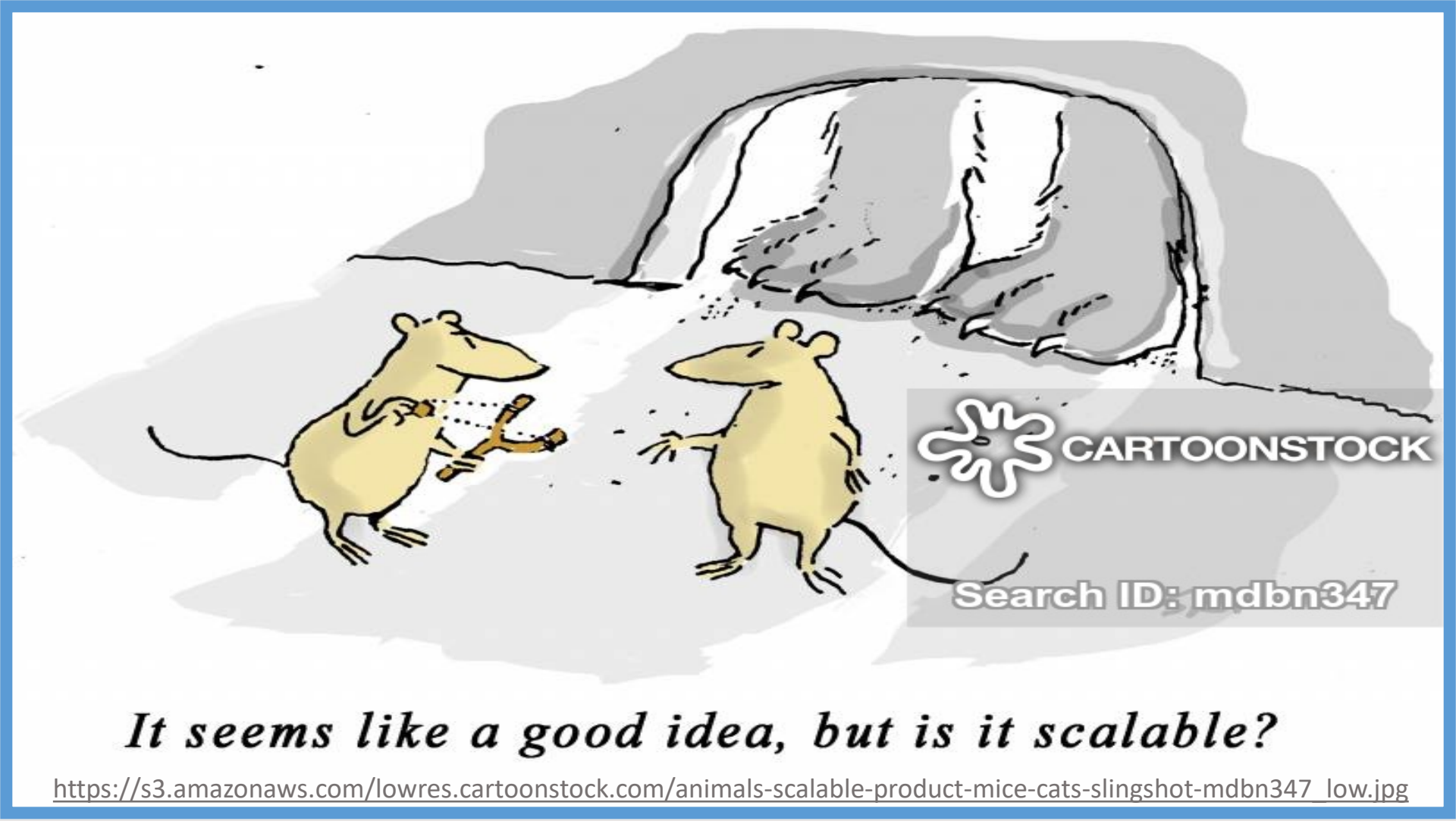

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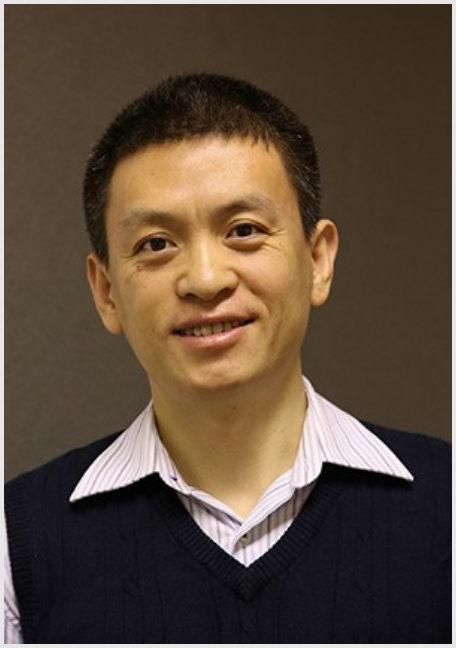
COM6012: **Scalable** Machine Learning - Spring 2021

https://github.com/haipinglu/ScalableML (Since 2019)

The University of Sheffield

Two lecturers

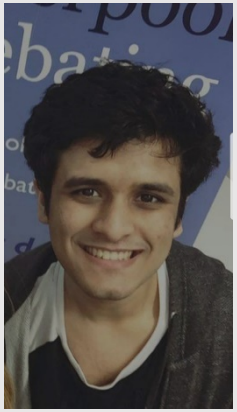


Haiping Lu

Module leader

Mauricio A. Álvarez

Four demonstrators (TAs)



Areeb Sherwani

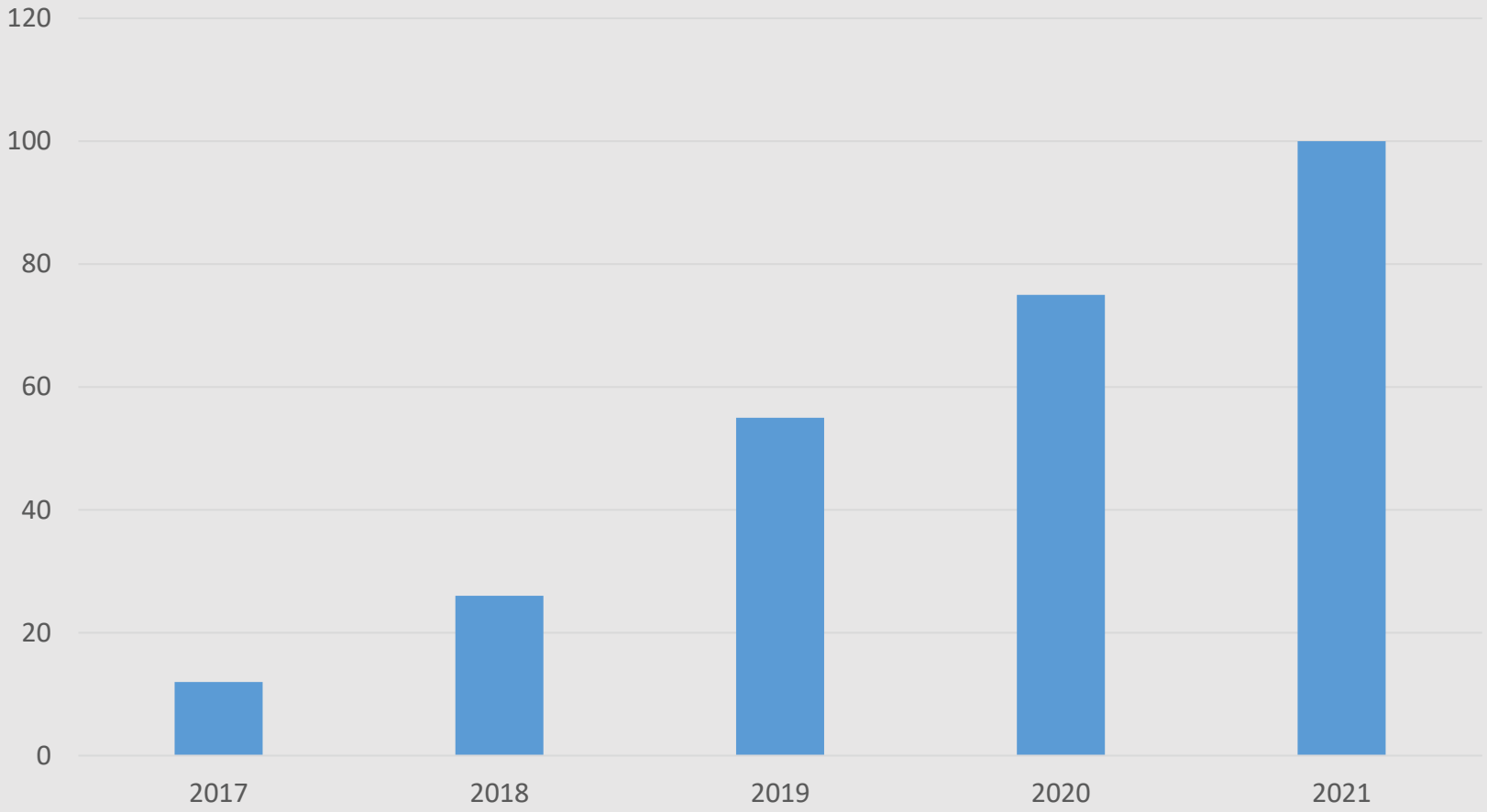
Head

Mario Alejandro Hevia Fajardo

Mingjie Chen

Tom McDonald

Number of registered students



Materials, expectations, & interactions

- **Monday 9am**: each week's materials are available in Blackboard/GitHub including video lectures, slides, and Jupyter notebooks (https://github.com/haipinglu/ScalableML)
  - From week 2, lab exercise reference solution available on Monday
- **Tuesday 5pm**: you are expected to have
  - completed studying the lecture video and slide
  - started working on the lab with problems encountered, if any
- **Wednesday 9-10am**: on-line session with the lecturer
  - Blackboard Collaborate
  - **Lab demos**, question answering, problem solving, material review
  - Get your question ready before the session starts
- **Thursday 5pm**: you are expected to have completed the lab
- **Friday 10-11am:** on-line session with the lecturer
  - Additional help sessions via Blackboard Collaborate

Additional (optional) interactions

- Online help-desk sessions with the demonstrators
  - Week 1-9: **2-4pm on Wednesdays** & **9-11am on Thursdays**
- Face-to-face sessions with a demonstrator
  - Cancelled during lockdown, pending further announcement
- Discussion board to post your questions and get answered by the lecturer
  - General forum: general question & feedback
  - Lecture & lab forums: two, first half + second half
    - To ask for clarification on related lecture/lab contents
  - Assignment forums: two, one for each assignment
    - To ask for clarification on assignment questions
    - NOT to ask the correctness of a specific solution, share a possible solution, or ask **how** to solve the problems. It is an **assessment**.
- Direct email for personal/private issues

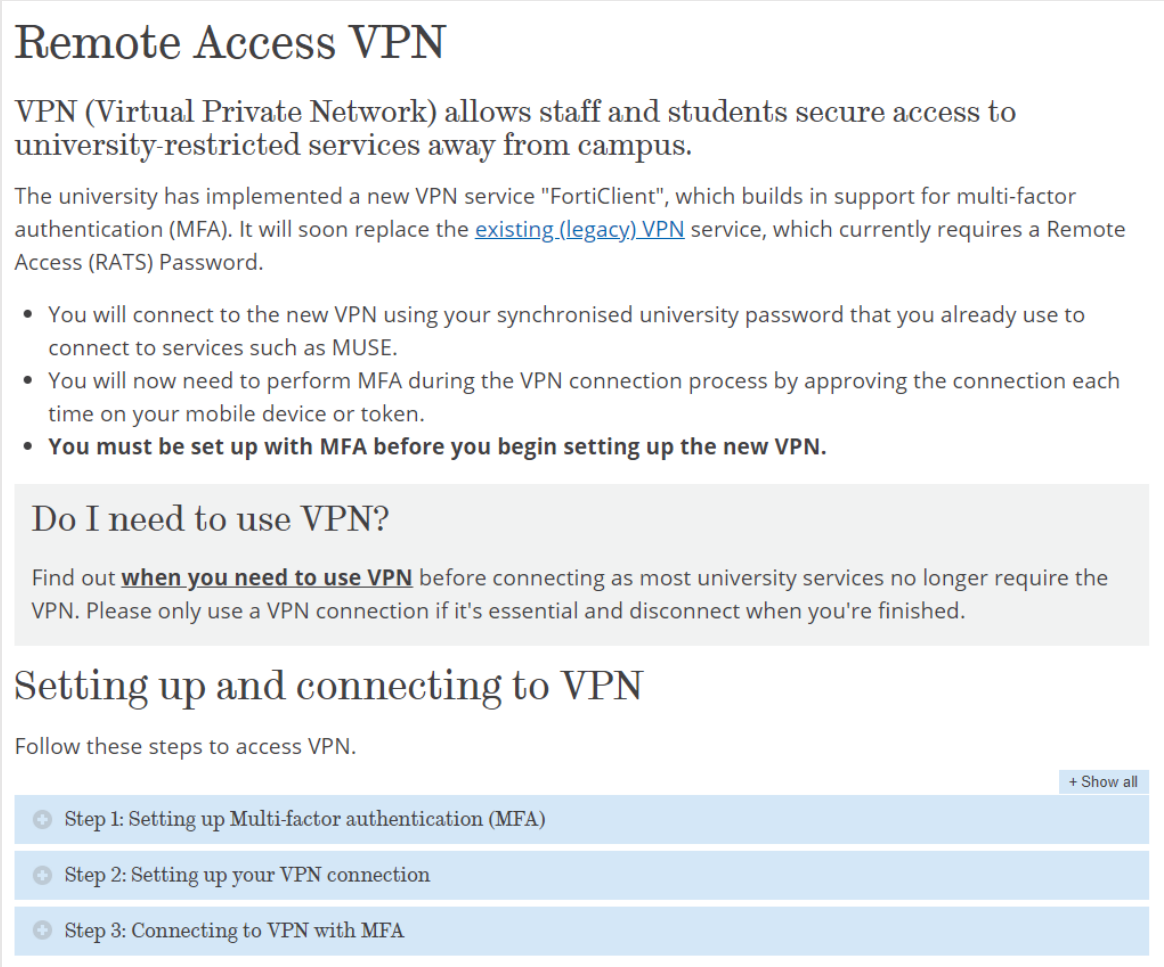
Assessment (2 + 2)

#	Assessment	Release	Due	Mark (total: 100)
1	Blackboard Quiz 1	25 Feb 6pm	26 Feb 6pm	20
2	Assignment 1	26 Feb 11am	12 Mar 11am	30
3	Blackboard Quiz 2	25 Mar 11am	26 Mar 11am	20
4	Assignment 2	27 Mar 11am	30 Apr 11am	30

- Marking and feedback (from Student Handbook)
  - Quiz: 1 working week
  - Assignment: 3 working weeks

VPN is **necessary** for assessment (HPC)

- See the official guide at https://www.sheffield.ac.uk/it-services/vpn



Remote Access VPN

VPN (Virtual Private Network) allows staff and students secure access to university-restricted services away from campus.

The university has implemented a new VPN service "FortiClient", which builds in support for multi-factor authentication (MFA). It will soon replace the existing (legacy) VPN service, which currently requires a Remote Access (RATS) Password.

- You will connect to the new VPN using your synchronised university password that you already use to connect to services such as MUSE.
- You will now need to perform MFA during the VPN connection process by approving the connection each time on your mobile device or token.
- **You must be set up with MFA before you begin setting up the new VPN.**

Do I need to use VPN?

Find out **when you need to use VPN** before connecting as most university services no longer require the VPN. Please only use a VPN connection if it's essential and disconnect when you're finished.

Setting up and connecting to VPN

Follow these steps to access VPN.

+ Show all

- Step 1: Setting up Multi-factor authentication (MFA)
- Step 2: Setting up your VPN connection
- Step 3: Connecting to VPN with MFA

More **hands-on** content

Wk	Date	Topic	Lecturer
1	08 Feb	Introduction to Spark and HPC	Haiping
2	15 Feb	RDD, DataFrame, ML pipeline, & parallelization	
3	22 Feb	Scalable matrix fact. for collaborative filtering (RecSys)	
4	01 Mar	Scalable K-means clustering	
5	08 Mar	Scalable PCA for dimensionality reduction	
6	15 Mar	Scalable decision trees	Mauricio
7	22 Mar	Scalable logistic regression	
8	19 Apr	Scalable generalized linear models	
9	26 Apr	Scalable neural networks	
10	03 May	Apache Spark in the Cloud (guest lecturer: Mike Smith)	