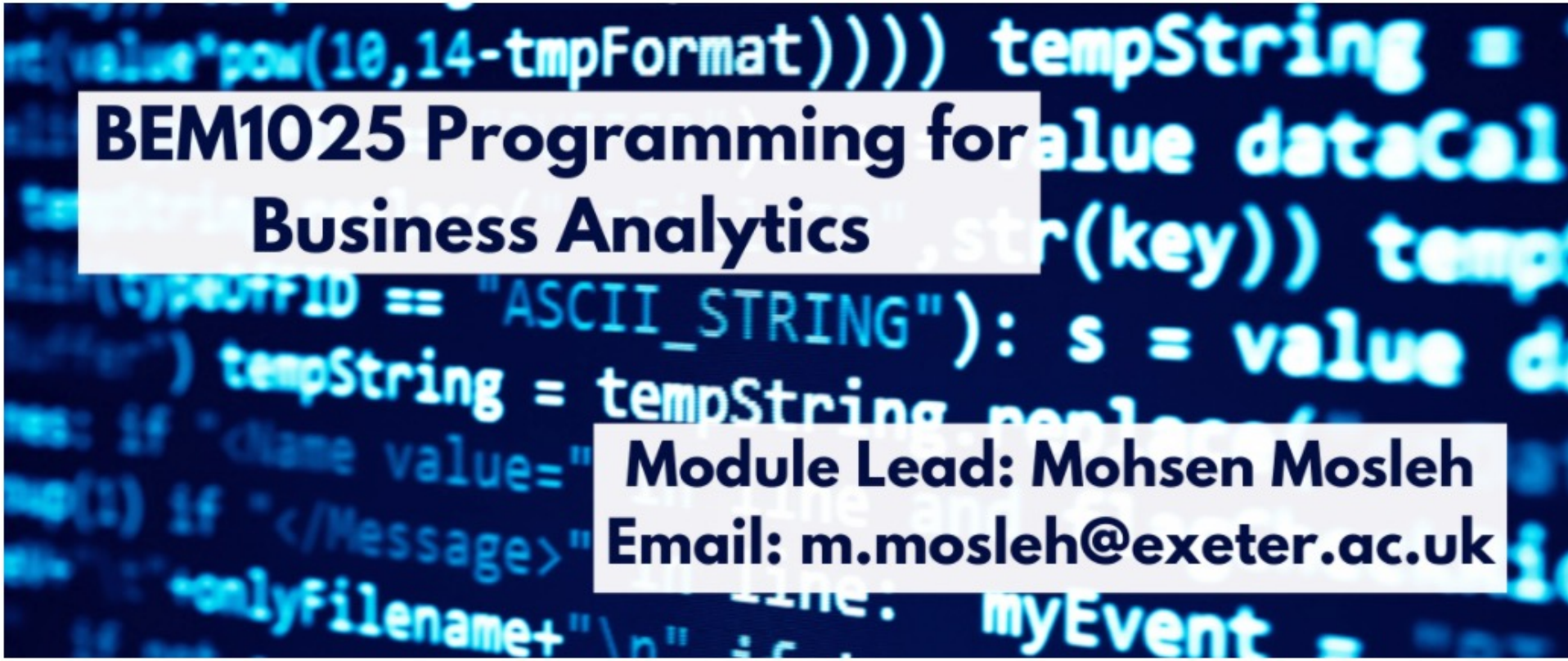
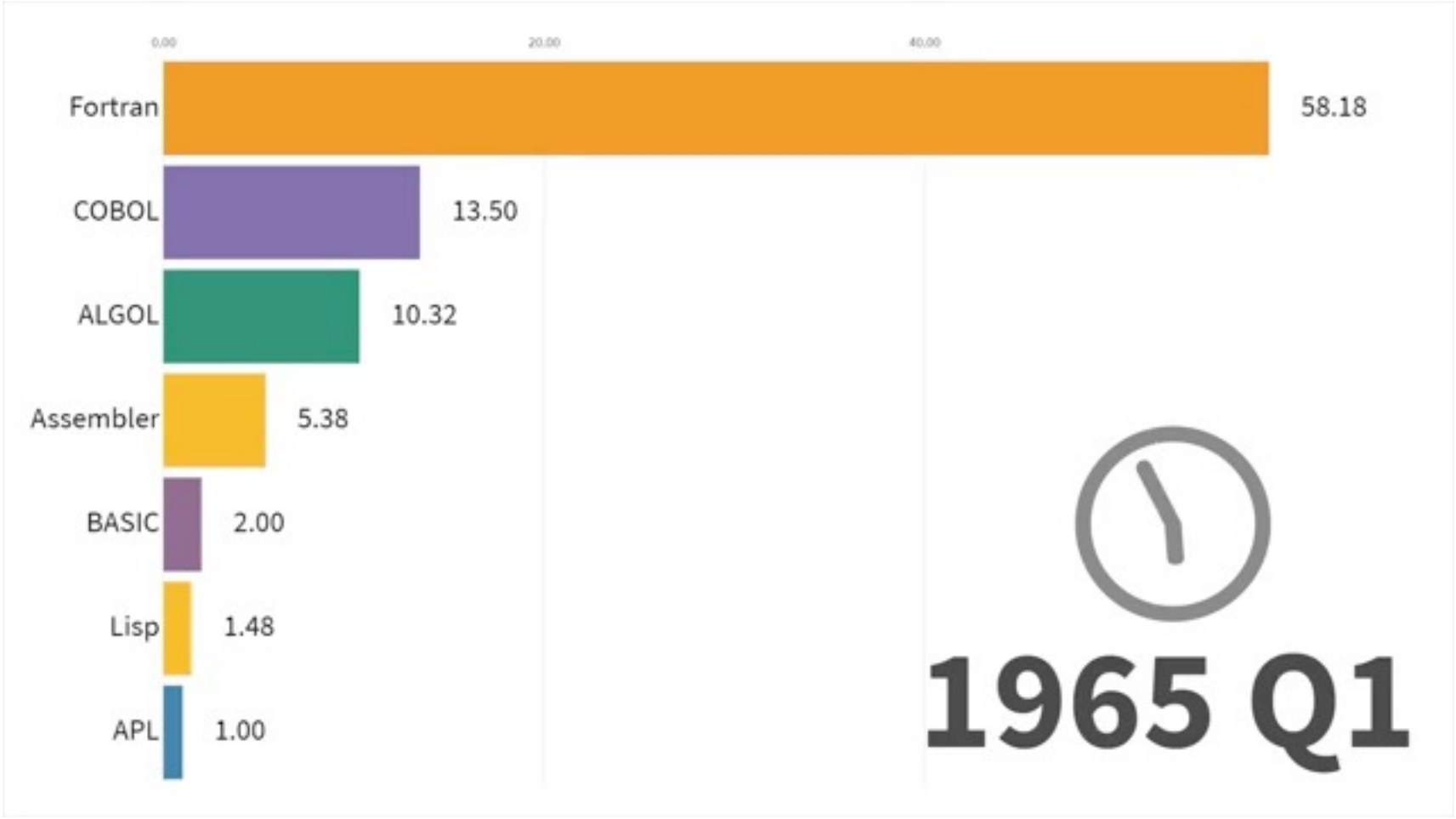

BEM1025 Programming for Business Analytics
Module Lead: Mohsen Mosleh
Email: m.mosleh@exeter.ac.uk

Programming language popularity over time



Welcome to BEM 1025!

Outline

- Warm up! (nice to meet you!)
- Introduction to BEM 1025
- Introduction to Colab (Jupyter) and basic Python

About me!

Background

- Senior Lecturer in management department, Alan Turing Fellow, MIT Research Affiliate
- PhD in Systems **Engineering**, Minor in Business Analytics
- Postdoc at Yale/MIT
- Systems & Software Integration **Lead for five years**

Research

- Social Network
- Misinformation and fake news

My TED talk: https://youtu.be/qtsSFHGb8EY

What about you?

shorturl.at/oAKNT

(5 min)

In this module you will learn **fundamental programming skills** that enable you to search and sort data. You will be introduced to programming in **Python**, and will learn how to develop and run programmes in **Jupyter Notebooks**. You will learn key programming principles and will practice applying them to real business problems. These skills will form the basis of your ability to address **business problems using data**.

Module meetings

- Whole Cohort Lecture (Friday 14.35-15.25)

Main lecture delivery, presentation of concepts

- Workshop/Tutorials: Tuesday 9:35-10:25 , Thursday 17:35-18:25 depending on your individual timetable

Hands-on programming and Q&A

Week 01 20/1/23	Session 01: Introduction to the module Introduction to Colab (Jupyter) and Python. No workshop this week –
Week 02 27/1/23	Session 02: Introduction to Pandas
Week 03 3/2/23	Session 03: Data Processing and Data Analysis
Week 04 10/2/23	Session 04: Data Assembly
Week 05 17/2/23	Session 05: 2hr lab based, open-book practical exam (40% of credit) Exam occurs on 17/2/2023 14:30 UK time – no main lecture
Week 06 24/2/23	No Lecture – reading week
Week 07 3/3/23	Session 06: Data Transformation
Week 08 10/3/23	Session 07: Data Visualization
Week 09 17/3/23	Session 08: Functions
Week 10 24/3/23	Session 09: Introduction to R/invited speaker
Week 11 31/3/23	Session 10: 2hr lab based, open-book practical exam Workshop: Q&A and preparing for exam Exam occurs on 31/3/2023 10:00 UK time – no main lecture

Assessment

Form of assessment	% of credit	Size of the assessment (eg length / duration)
Practical exam 1	40	2hr lab based, open-book practical exam
Practical exam 2	60	2hr lab based, open-book practical exam

- We organize in class online tests so that there is a time window (e.g., 6 hours) that students can start it at any point within that. However, the test itself is only 2hr (plus 30min for uploading to BART)

Assessment

- You will apply the concepts and techniques you leaned in previous sessions. You are expected to work on the assignments on your own DURING the duration of the lab.

- You will be given a dataset in a jupyter-notebook where you need to address a set of questions regarding the dataset where you need to apply relevant options (e.g., sorting, filtering, columns operation, simple statistics, such as max, min, mean, grouping, and visualization).

- We will have exam prep sessions!

- You are expected to submit the code developed for each assignment AT THE END of the session.

Any questions on the course logistics?

Recommended Reading

- **Think Python**, Allen B, Downey, O'Reilly, second edition
- You may also find the following book useful for learning more about R. It is freely available online, and also available in printed format in the university library:
- **R for Data Science**, Haley Wickham and Garrett Grolemund, O'Reilly, 2016
- There are further useful resources on the Python and R websites. Further information and resources for the Jupyter Notebook interactive development environment are available on the Jupyter website.

Programming is mostly about learning by doing!
All materials will be posted on GitHub

1. Read the handbook and ask questions.
2. I will keep the BEM 1025 GitHub Repository updated
3. Go to ELE and review reading material

Contact me

m.mosleh@exeter.ac.uk (Include [BEM 1025] in the subject line)

Office hours: https://calendly.com/m-mosleh/bem1025

Lets get started with Colab!

https://github.com/mosleh-exeter/BEM1025

(We will use Google Colab for Python programming, but you can use your programming environment of your own if you like e.g., Anaconda)