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TechTalent Academy

Data Science Course

Welcome Session

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Welcome Session Structure.

1

Key Information.

- About TechTalent Academy

2

Your Course.

- Course Overview
- Microsoft Teams
- Communication & Support

2

Keeping You Safe.

- Safeguarding
- Prevent
- Wellbeing

4

Set-up & Go.

- VS Code
- HLT

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The Journey Begins Here.

Welcome to TechTalent Academy! Your Data Science journey begins here. The time has finally come, your application has been accepted and you're now an official TechTalent Academy Student!

This welcome session will get you familiar with TechTalent Academy. You'll learn more about who we are and our purpose, you'll also get an introduction to your trainer alongside a more in-depth **course overview**.

We'll also cover other pieces of **key information;** Safeguarding, Wellbeing, Support and how to get started with remote learning.

We're delighted to have you here with us and can't wait to get started.

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Meet your technical trainer.

- EX- science teacher
- Worked in a variety of teaching and learning roles
- In my current role for over 18 months
- I have 2 cheeky Jack Russel Terriers (apologies for any barking!)

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Our Mission.

We give people like you the skills, confidence and opportunities you require to access a career in the tech sector.

Our Vision.

To create a fair and fit-for-purpose tech industry for everyone and anyone with talent.

TechTalent Academy are committed to ensuring your future success. Whether you're looking to upskill, reskill or switch careers, our **Data Course** gives you the skills, confidence and experience you need to further yourself.

Not only do we deliver **industry leading training** backed by **industry recognised certifications** we also provide you with access to employability workshops and job opportunities with some of the UK’s biggest Tech companies.

Our expert team of **highly-skilled instructors** are on hand to guide you through your journey with us. You’ll be gaining access to an instructor led course with supporting materials all geared around getting you certified and career ready.

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TechTalent Academy
Course Content

1. Databases (SQL and MongoDB)
2. Python Fundamentals
3. Data analytics and Visualisation with NumPy, Pandas and Tableau
4. Machine and Deep Learning

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TechTalent Academy
Course Structure

1 Databases concepts (SQL and noSQL)

- Learn key CRUD queries (CREATE, READ, UPDATE, DELETE)
  - on relational databases using the SQL language
  - on non-relational databases using specific commands in MongoDB in relation with the JSON syntax
- How to create relational tables containing data using SQL
- How to perform some Database administrator tasks

Overall you will get Data Science skills at using the SQL syntax and JSON syntax to work on SQL and noSQL RDBMS

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TechTalent Academy
Course Structure

2 Python Fundamentals

- Learn how to write and share Python scripts using Jupyter Notebook
- Practicing the three pillars of programming techniques : Sequence, Selection, and Iteration
- How to re-use code to build faster programs with variables and functions
- Understanding the fundamental features of Python Object Oriented Programming language (OOP)

Overall you will get Data Science skills **at using key OOP concepts of Python to build efficient programs**

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Course Structure

3 Data Analysis and Visualisation

- Learn how to work with real word dataset performing core data analysis steps (data cleaning, data filtering, and data analysis with applied statistics)
- How to work with different types of data formats: multidimensional arrays, excel sheets and CSV, and JSON using the Pandas and Numpy libraries from Python
- How to retrieve data from URL and APIs in Python
- Learn how to perform fast data calculations, aggregation, and visualisation
- Create meaningful data visualisations and data dashboards using Tableau

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Course Structure

4 Machine and Deep Learning concepts

- Learn key Machine and Deep learning algorithm concepts and their applications in Data Science
- Sci-Kit Learn library from Python will be used for Machine learning and TensorFlow for Deep learning (scripts will be provided)
- **BCS exam preparation in Machine and Deep learning concepts to get a certified certificate and one year free membership**

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TechTalent Academy
Course Overview

Week	Topic
1	Welcome Introduction
2	Databases: SQL
3	Databases: MongoDB
4	Python Fundamentals session 1
5	Python Fundamentals session 2
6	Python Fundamentals session 3
7	Data Analysis with NumPy
8	Data Analysis with Pandas
9	Data Visualisation
10	Machine Learning
11	Deep Learning
12	BCS mock exam
13	**BCS exam**

13th April →

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Learning From Home

Data Science Course Format

Schedule:

There will be **1 class per week at 6.30 pm every Thursday**. This will last 2 hours.

Submission Day:

Your trainer will set mandatory assignments each week.

Submission day is the day before your next class (Wednesday). Each week you will submit work through Teams.

Out of Hours:

You can message out of hours and I will reply back to you as soon as I can.

TECH TALENT ACADEMY | **Home Learning Tasks**

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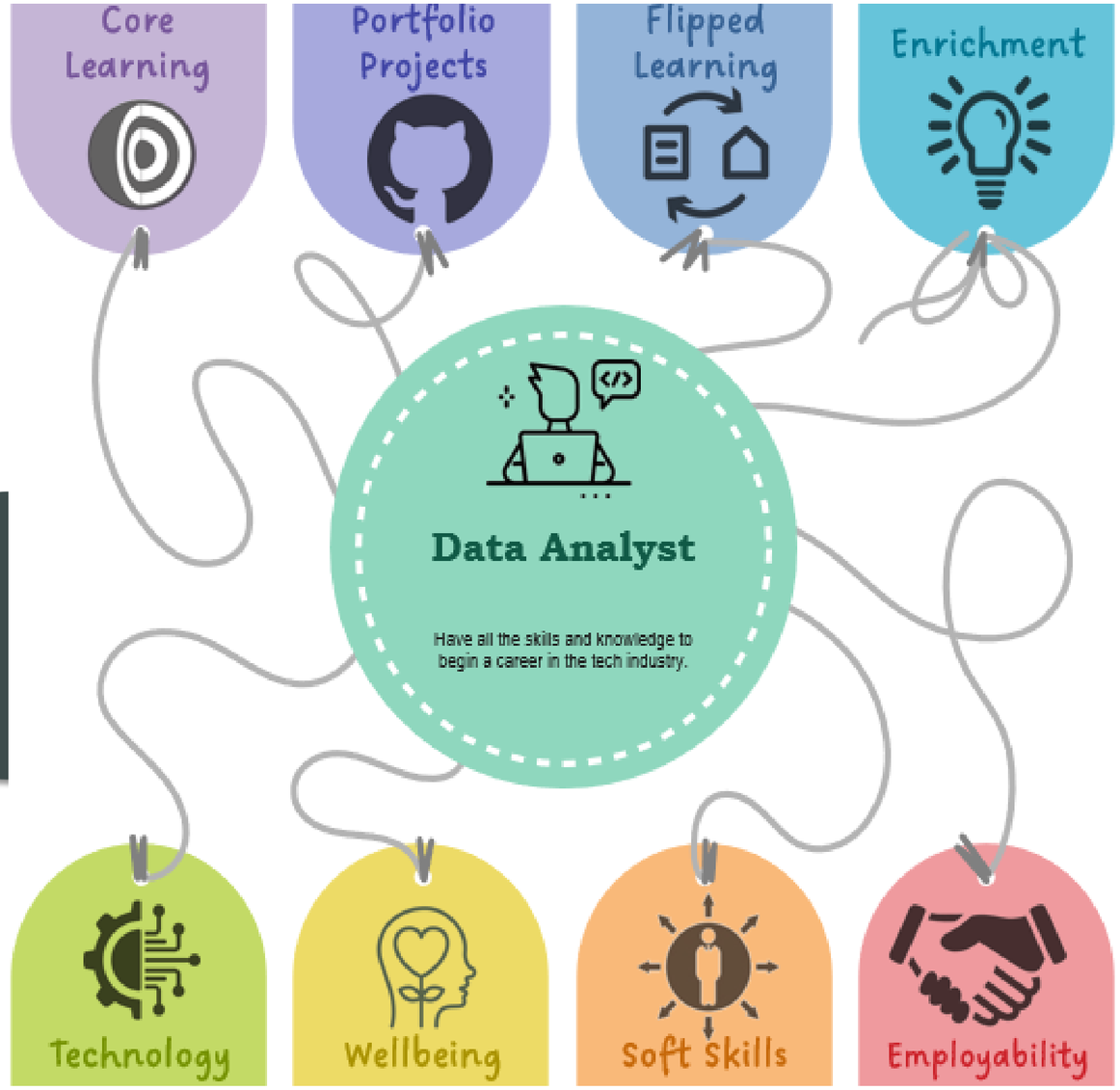

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These projects will be assessed by your trainer who will provide extensive feedback on how to improve your work

Core Learning

Extension projects for Core Learning. The outcomes are uploaded to GitHub to share with future employers.

Portfolio Projects

Resources that can be viewed ahead of the lesson to help you familiarise yourself with new learning.

Flipped Learning

Resources that provide a background to a particular technology or concept.

Enrichment

Technology

Resources which support a technology used within the tech industry.

Wellbeing

Advice and guidance on how to ensure you are taking time to focus on yourself and the people around you.

Soft Skills

Support on how to further develop soft skills needed for a career in the tech industry.

Employability

Ensure everything is in place to apply for work and be successful in interview.

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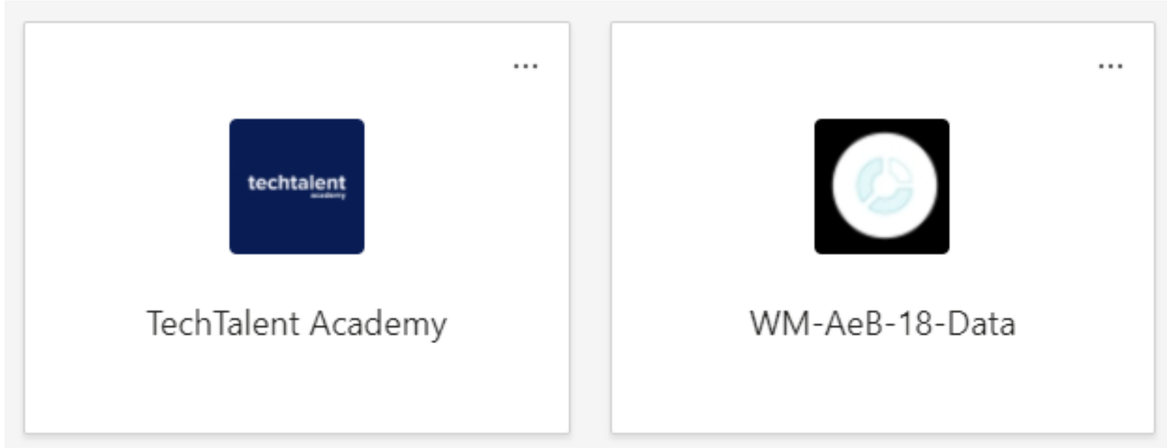
Using Microsoft Teams.



You have access to two Teams:

- GLA-13- Data
- TechTalent Academy

- All ‘non formal’ communication will be through Teams
- You will only have access with your techtalent student email account.
- You have access to post on in various 'channels' – this will be seen by all members of the course
- The lesson slide deck will be uploaded in the files section before each session

Using Microsoft Teams.

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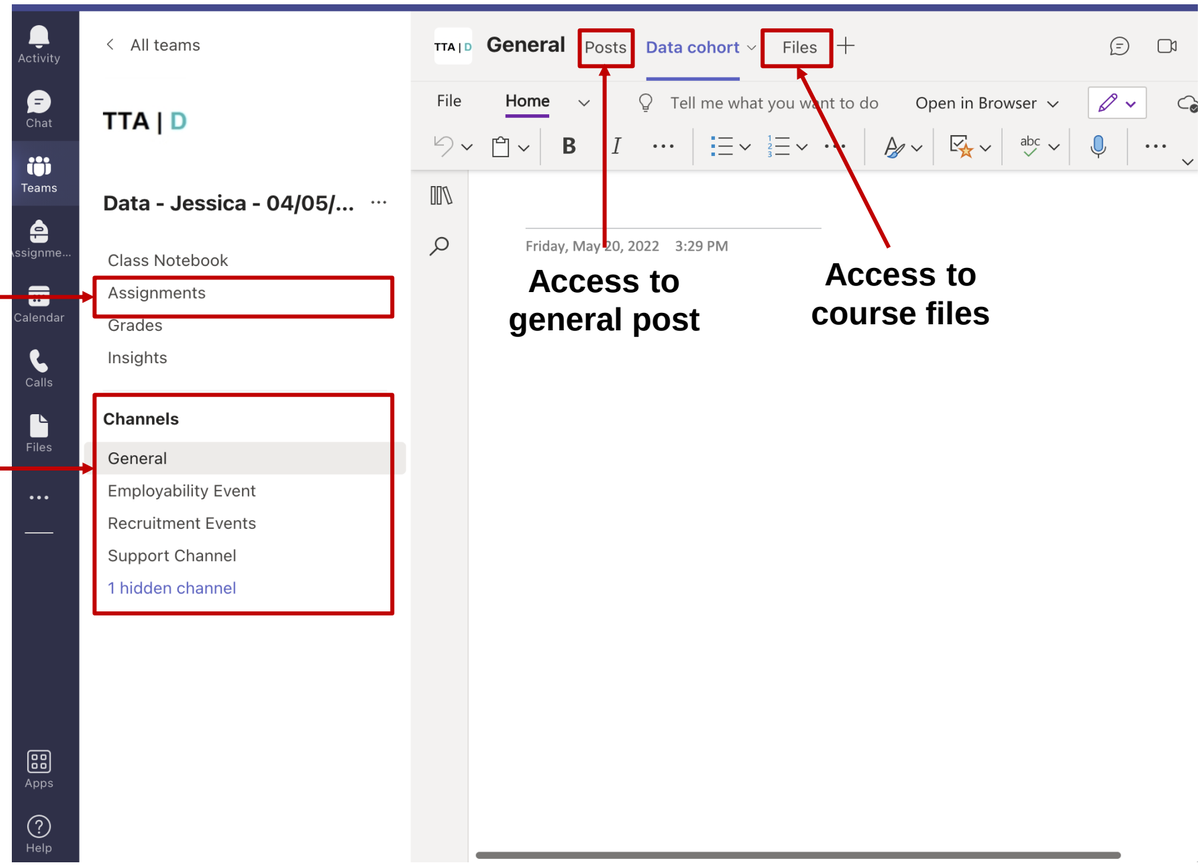

Teams will be used throughout the course to communicate slides, HLT, and marking your assignment

Tech Talent Team – Employability Channel

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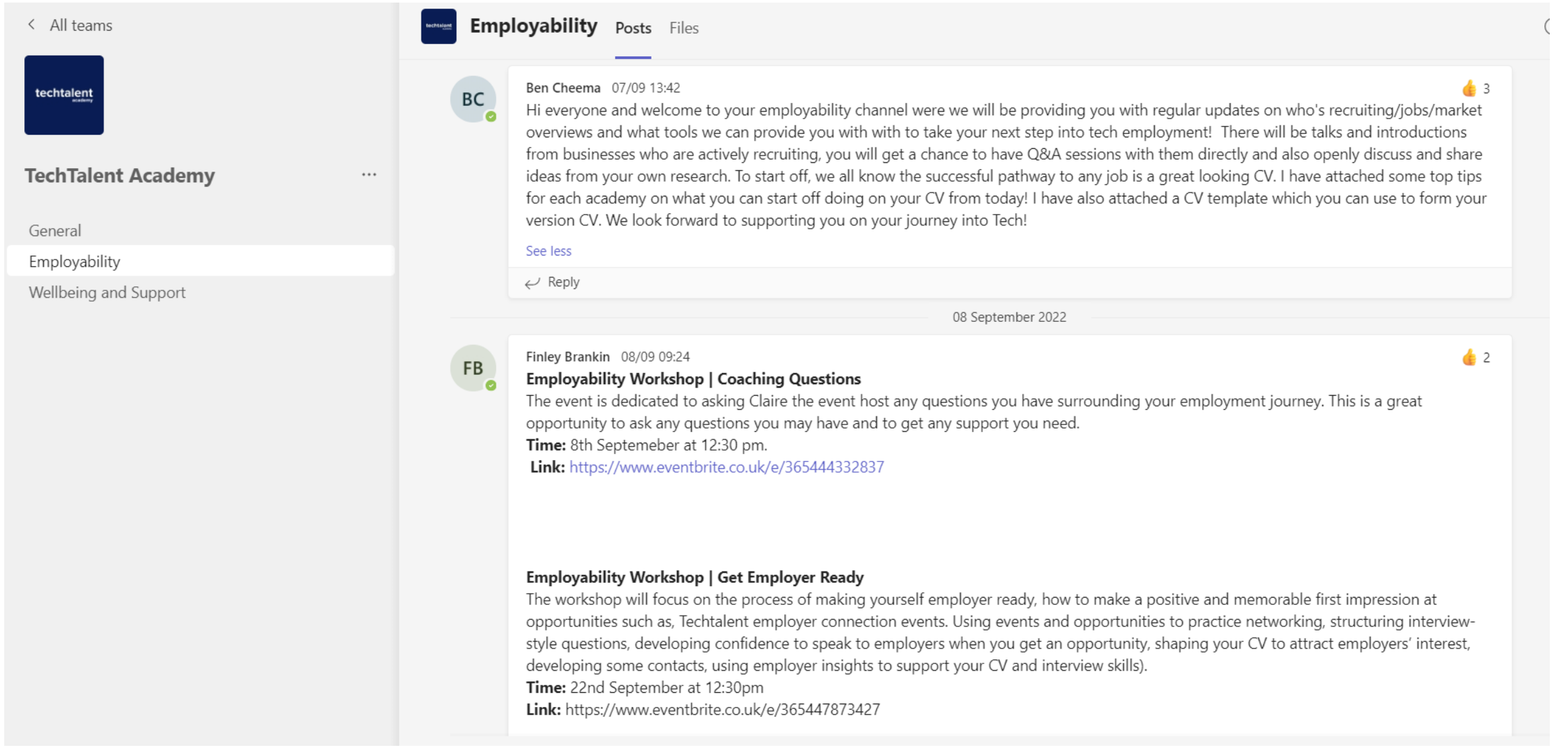

This is where you can gain information about general TTA announcements and employability

- Employability workshops and events will be posted in the Employability channel.

Academy benefits –in general tab also

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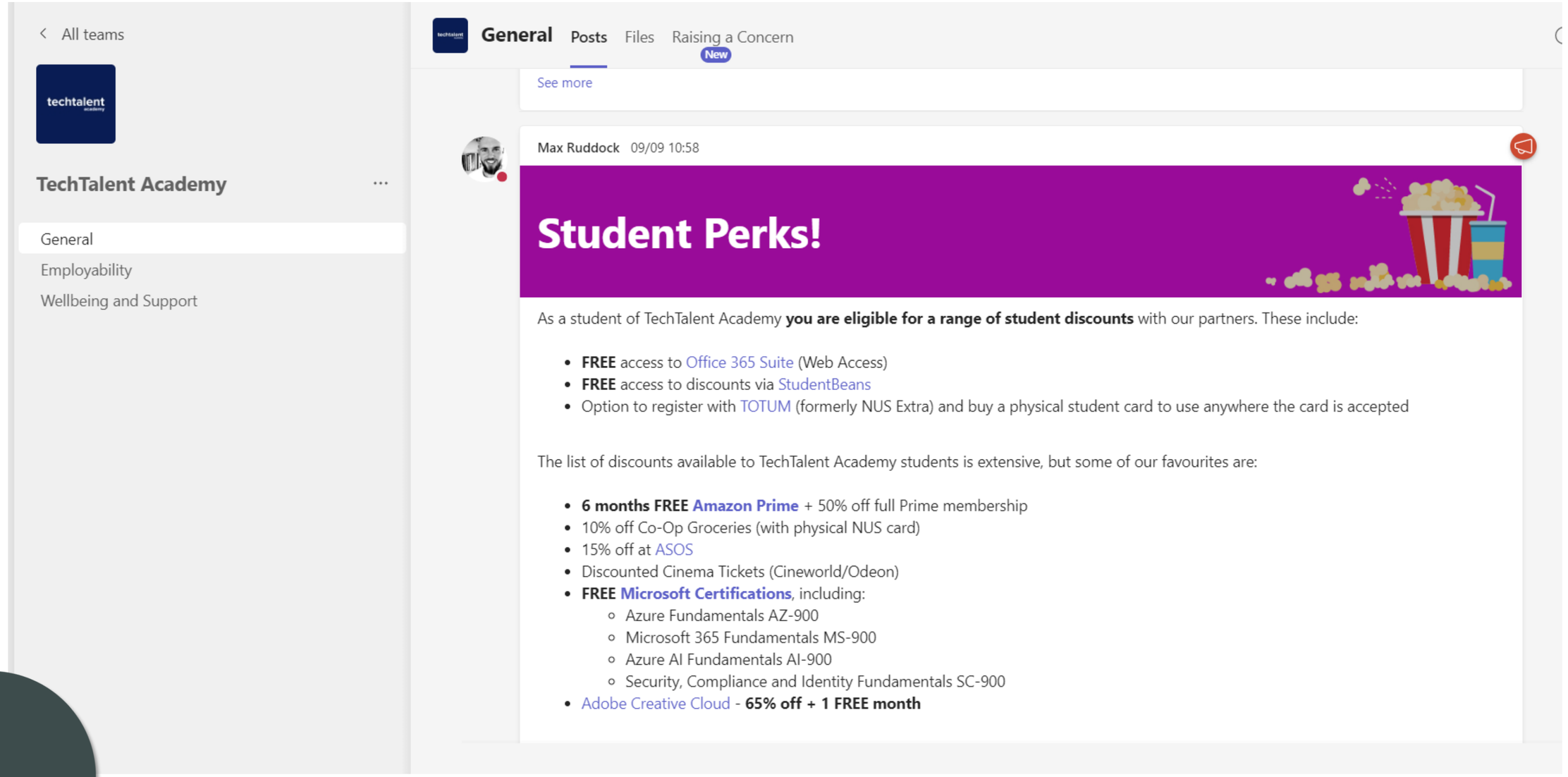

Useful Contacts.

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Rules.

- Arrive promptly for the start of the day and from breaks
- Be respectful of everyone
- No foul, abusive, or inappropriate language
- Minimise emails, log out of social networks, and switch phones to silent
- Try and complete work on time

Communication.

- Class webinars (Teams)
- Individual emails, messenger (Teams)
- Calls on Teams as required
- Email address: georgina@techtalent.academy
- Telephone: Email or DM me in Teams as this helps to manage calls.

Jobs & Recruitment contact:
employability@techtalent.academy

Complaints or welfare issues contact:
max@techtalent.academy

Issues accessing Teams:
onboarding@techtalent.academy

Your TTA email access:
https://outlook.office.com/mail/

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TechTalent Academy
Course Requirements

Attendance
- **70% of attendance is required to pass the course**

If you can't make it, then a notice must be given to the trainer for authorised absences

Home Learning Tasks
- **80% of each module's Tasks must be completed**
- Submitted on Teams

CV Skills Builder Workshop Attendance
- LinkedIn Profile
- CV Provided after CV Session

Additional
- 30- and 90-Day employment update is required – Linked to your funding
- Proof of employment or change in job role

Assessments.

- BCS What Is Machine Learning Exam will be sat during one of your scheduled lessons. It is multiple choice of **18 questions and 65%** is needed to pass

  If you fail and need to resit the exam, this can be arranged through TTA but you will need to pay the cost **(£78)**

https://www.bcs.org

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Useful Contacts.

- Government Guidance
- Useful Websites
- Staying Safe Online
- Videos

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Staying Safe.

- British Values
- Online Safety
- Equality & Diversity
- Extremism & Radicalisation

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TechTalent Academy
Safeguarding Policy

Safeguarding refers to measures designed to protect the health, wellbeing and human rights of individuals. In essence, it means keeping people safe from harm. TechTalent recognise that we may come across adults that require safeguarding so the purpose of this is to protect our learners from harm that arises.

Safeguarding means protecting peoples' health, wellbeing and human rights, and enabling them to live free from harm, abuse and neglect.

How We apply Safeguarding at TechTalent Academy:

- Create safe environments for our learners through robust safeguarding practices.
- Ensure that adults who work at TechTalent, including volunteers, don't pose a risk to our learners.
- Make sure staff are trained, know how to respond to concerns and keep-up-to-date with policy and practice.
- Teach our learners about staying safe in life and online.
- Maintain communication and have an environment where learners feel confident to approach any member of staff if they have a concern.

TTA safeguarding lead:
max@techtalent.academy

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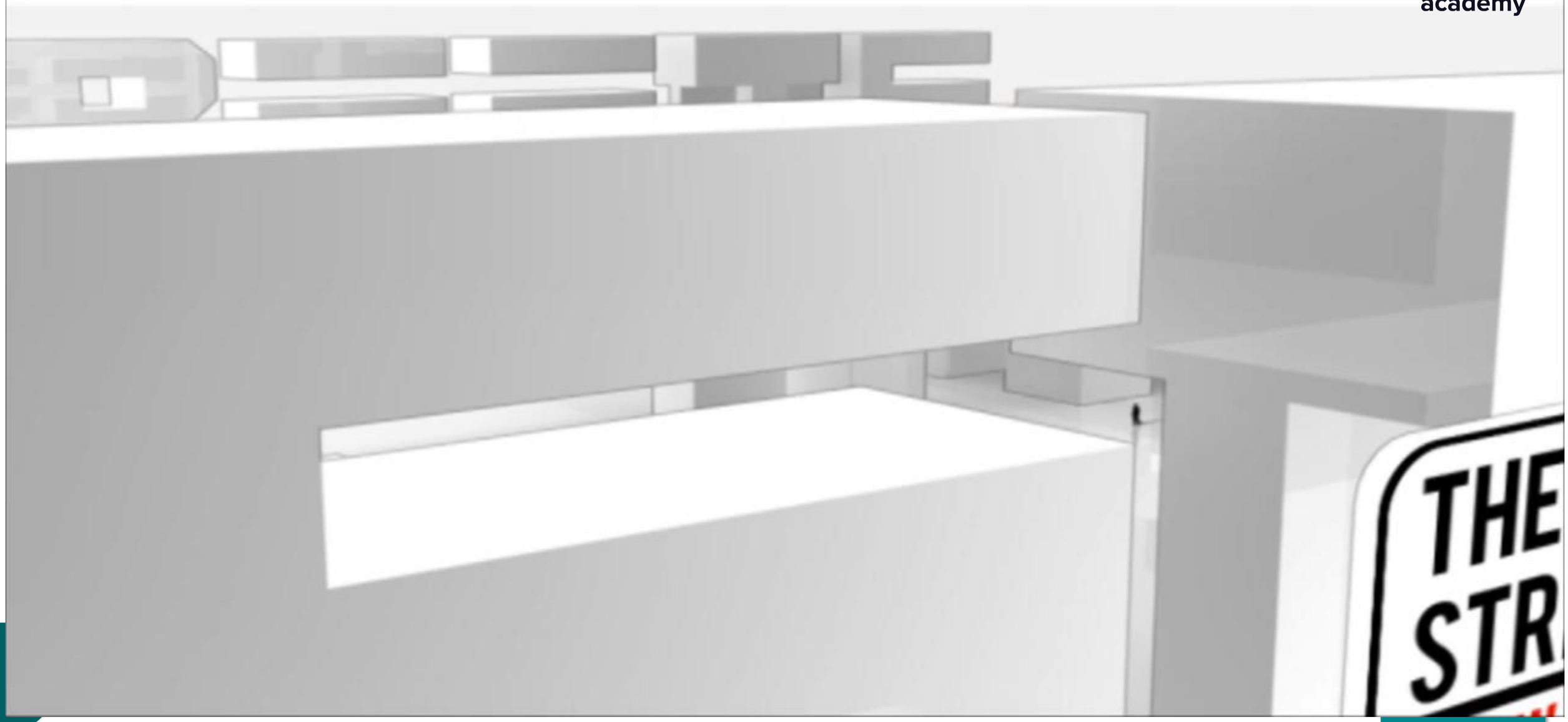

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Data Course
Software Requirements

VS Code to install on your PC to code with SQL and Python:

https://Code.Visualstudio.com/Download

MySQL, MongoDB and Python extension packages

This weeks assignment will be to install software ready for next week (Only SQL!)

IDE.

An integrated development environment (IDE) is a software application that provides comprehensive facilities to computer programmers for software development.

- Pycharm
- IDLE
- Spyder
- Jupyter Notebook/Lab
- Visual Studio Code (VS Code) – this is what you will be using
- Repl.it (Web-Based)

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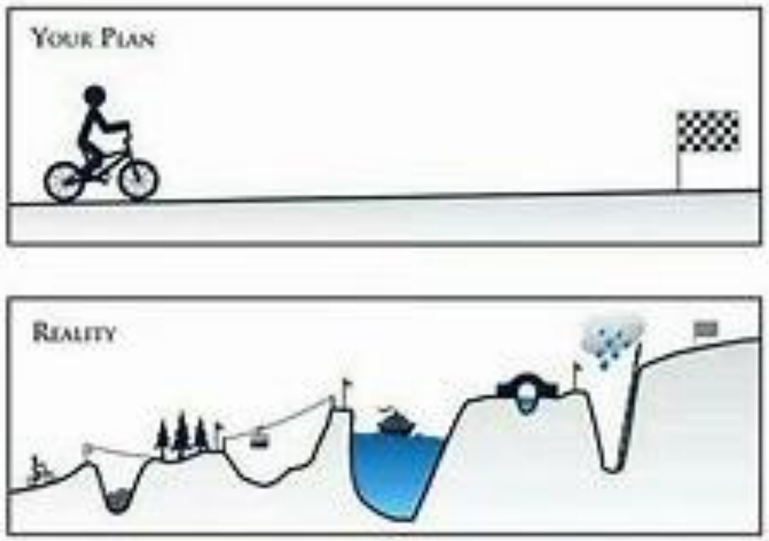
“Be the change you want to see in the world”

“If it's important to you, you will find a way. If not, you will find an excuse.”

"Fortune always favours the brave, and never helps a person who does not help themselves."

“Success is not an accident, success is a choice.”



“Most of the important things in the world have been accomplished by people who have kept on trying when there seemed no hope at all.”

“You don’t start out being great, but you’ve got to get started to be great”

“Challenges are what make life interesting. Overcoming them is what makes life meaningful.”

“Success is the ability to go from one failure to another with no loss of enthusiasm”

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Data Science Course

Thanks for attending!
Have a great day