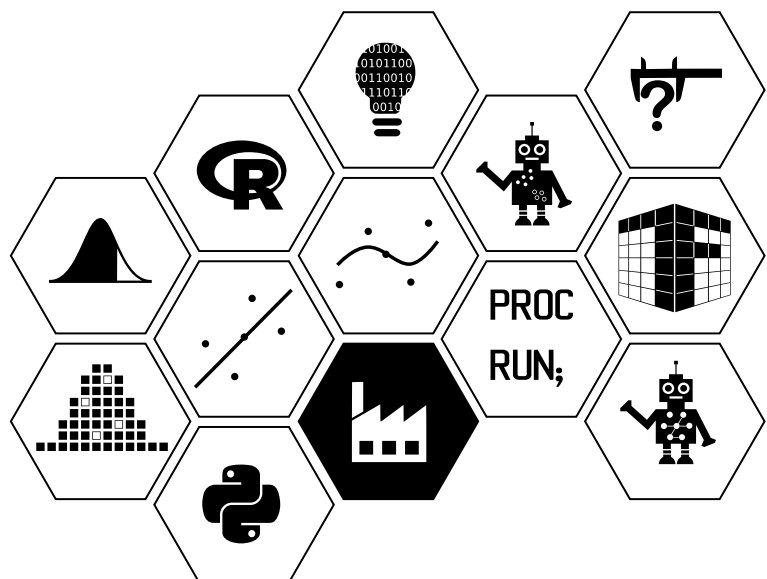


Data Analytics in Business and Industry

Group Work: Project Guidelines and Description



Group project

In this assessment you are expected to work collaboratively with other students in small groups of around 3 students. In your group, you will work on a joint project that will account for 50% of your grade. This requires all members of the group to contribute to planning, research, coding, discussion and writing.

I highly recommend you work through this supplementary group work course from OpenLearn before beginning this assessment.

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[A short course on group work with OpenLearn.](#)

Group allocations

We fully appreciate that group work within an online programme has its own challenges. The first objective is to allocate you into a group with people from a similar time zone. Please complete the Moodle questionnaire before the deadline to tell us your local time difference from GMT. If you do not complete this then you will be allocated to a group at random.

Why some groups fail

Working in groups presents new challenges and problems. Below are some reasons why group work can fail. You should discuss these points with your group prior to beginning the project and establish measures you will take to avoid them.

Individual problems	Process problems
No attempt to work with the group	No agreement on ground rules
One or two people try to dominate the group	No clear goals set out for each meetings
Some people do not contribute to group discussions	Specific roles and tasks are not clearly delegated to specific members

Individual problems	Process problems
Group members are dismissive and disrespectful to others	Deadlines are not set for each task
Members do not use their initiative to start tasks or discussions	Meeting times are set to a time that does not suit all members
Members are unreliable or do not complete tasks by set deadlines	Nobody records items discussed at each meeting

Why some groups don't fail

Now we have covered things that could go wrong, let's now discuss how to [create a success group](#).

1. Set the ground rules early.
2. Set up a regular meeting time that everyone can make.
3. Align group roles and responsibilities with individual strengths and interests.
4. Identify what tasks must be completed and in what order with clear goals and deadlines.
5. Choose a group leader who is comfortable taking on that role. This isn't to say the group leader is in charge, but the group leader should be responsible for chairing group meetings and uploading your final project.
6. Choose someone to make notes from each meeting. This person could also put together a timeline with tasks and deadlines for everyone to work from.
7. Communication is key. Let your group know when you have completed a task and report back your findings. Likewise if you have a problem then report this to your group and work together to find a solution.
8. Create a central forum to communicate with everyone. We recommend each group set up a MS Team.
9. If you have any problems working with your group then be honest. Your first point of action should be to speak with your group to resolve this issue.
10. Be accountable to your group.

Why group work?

You may be asking yourself why we have group work as part of this course. This is simply because working in a team is an essential skill needed for data science in practice.

Weblink 2

[Why team building is important to data scientists.](#)

Weblink 3

[Teamwork is essential in data science.](#)

Structure your group

It is best to get started as soon as possible communicating with your group. In order to do so, we recommend you set up a group Team. As a university student you have access to Office 365 which includes Microsoft Teams.

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[Information about Office 365 for University of Glasgow students](#)

One member of each group should set up a Team and invite all other members to join. For guidance on how to create a Team, please follow [how to create a new Team](#). Once created, the group member can [invite members to join the Team](#).

Microsoft Teams is a convenient way for you to arrange calls, share files and have discussions. You are free to use any method for group communication but you must make sure the options used are accessible to all group members.

Agile project management

You may already work in a team that uses Scrum to manage projects. Your team will not have the benefit of working with a client, or Product Owner, but some principals of Scrum may be beneficial to your group project in order to meet short term goals.

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EduScrum.

Reframing the Scrum framework to this group project, then the recommendations are as follows.

The Team

- The Team is responsible for their own learning and ensuring that they mean the learning objectives of this project.
- All team members should identify their strengths and how they can be used to contribute to the project.
- The Team is self-organised.
- The Team needs to track it's own progress.

Team Captain

- Your team should pick a member who plays the role of Captain.
- The Captain is responsible for ensure that the progress of the team is transparent.
- The Captain should facilitate group meetings.

Transparency

- Team meeting should be regular.
- All team members should present what they are working on and what they have achieved.
- The Team should inspect the progress, provide feedback and adjust any goals if needed.

Reflection

- All team members should take time to reflect on their work and the work of others. This reflection can help identify any problems and all the team to adapt quickly.

Project Description

Targeting customers is an important marketing decision for most companies. The aim of this project is to identify customer segments that a company can target in any marketing plans and the

positioning of products.

A company recently introduced a variety of discount offers to members. Customers need to spend a certain amount of money over a defined period of time. In return, the customer received a discount voucher. The company wants to know which members responded best to this marketing campaign by spending more money.

Data

The data for this project is available on Moodle under the group work project description folder. The data comprises of three separate files described below.

portfolio.json

contains information about the ten promotions.

- **reward** is the monetary value of the promotion.
- **channels** is the ways in which the promotion was advertised.
- **difficulty** is the amount the customer needs to spend in order to receive the reward.
- **duration** is the total number of days that the promotion was available.
- **offer_type** is the type of promotion. This is either a money off offer (discount), buy one get one free (BOGO) or a news letter (informational).
- **id** is the promotion identification.

transactions.json

contains information specific transaction across the promotion period.

- **person** is the customer membership identification.
- **event** is the event - either offer received, offer viewed, offer complete or transaction.
- **value.offer.id** is the promotion identification.
- **value.amount** is the amount spent in GBP for a given transaction.
- **value.offer_id** is the promotion identification.
- **value.reward** is the monetary value of the promotion.
- **time** time from the beginning of the promotion period.

profile.json

contains information about customers.

- **gender** is the identified gender of the customer.
- **age** is the age of the customer at the time of the promotion period.
- **id** is the customer membership identification.
- **became_member** is the date when the customer became a member.
- **income** is the self reported income of the customer at the time of the promotion period.

Learning objectives

Question of interest

1. Identify clusters of customer that completed more transactions and/or spent more money over the promotional period.
2. Provide an interpretation of clusters with visual representations of each cluster.
3. Provide a clear description of customer characteristics that the company should focus their attention to and explain why.

You may find week 6 helpful in relation to this project.

How to start

In order to complete this project, your group must derive a set of informative variables that you can use to cluster customers into groups. Variables of interest may include, but certainly not limited to, the total average spend per customer, the total number of completed offers, or the number of transactions over the set promotion period.

Assessment Guidelines

The assessment for the group project will comprise of two components

1. A group submission (50%)
2. An individual reflection on group work (50%)

Group Submission

Your group have been asked to provide the results of the group project in such a way that best communicates the outcomes. Please aim this submission to a company stakeholder who is interested in the outcomes but have little understanding of data analytics.

Your group can present the results in anyway you like. You might find it helpful to consider

1. A presentation (no more than 15 minutes in length)
2. A written report (no more than 5 pages long)
3. A poster presentation (no more than 15 minutes in length)

but you can choose any communication method that you think best delivers the message you would like to convey to the relevant stakeholders.

Please ensure your group submission has an informative title and a list of group members.

Only one member of the team should submit the group work on behalf of the group. Submissions will be set so that the rest of the group can see what has been uploaded.

Structure of your group presentation

In this section, you can find a suggested plan for the presentation. It is not compulsory to follow this structure but should be used as guidance. The main objective to this assessment is to present a clear introduction to your project and present results and conclusions to a non-technical audience. You should assume the audience do not have access to your data and have little experience in the technical details. They should be able to understand the aims of the project and interpret the results.

Submitting your group work

You can submit the group work in appropriate way. This can be a word, PDF, HTML file, a mp4 file or even a link that I can use to access your submission.

Individual reflection on group work.

Each group member must complete an individual reflection on their experiences taking part in the group project. The focus of this should be on your own individual contribution only including an analysis of your contribution to the project and how you worked with others in your group. Instead, analyse your academic performance, evaluate aspects of group work that you enjoyed or disliked and consider how you may improve in future and explain why.

This should be no more than 1000 words.

Assessment grading

Presentations will be assessed using a marking grid. Please read this before beginning your project. You will notice that the assigned mark will be a weighted average of four set criteria. Please pay attention to the criteria and relative weights.

Your individual reflections will be graded using a different marking grid, also available on Moodle. Please read this before beginning your individual reflection.

Your final mark will comprise 50% from your group presentation and 50% from your individual reflection.

Late submission

If your group submits the project late, then all group members are subject to a late submission penalty described in the student handbook.

Good Cause

If you submit a successful good cause claim in relation to this project then you will need to complete an individual assessment during the reassessment period. Please see the student handbook for specific dates of the reassessment period for semester 2.

Formative Assessment

Your group will be invited to take part in a formative peer assessment. Please see Moodle for the specific dates. Your group should prepare a submission (for example a 5 minute presentation or a 2 page written report).

As a group, you will be asked to provide feedback to other groups and you will receive feedback on your submission from other groups.

This is not assessment, and should be used as an opportunity to review work from others, and implement some of the feedback you receive before your final project submission.

