

Datathon Group Assignment Outline and Marking Guide (2024)

This is a real industry project partnered with Fetch Pet Insurance (not just another assignment)! You have opportunities to talk to and receive feedback from industry partners in this project. Outstanding mid-term and final solutions will be shared with industry partners for feedback. The solutions that your team created could make a real-world impact.

Summary

1. Objectives:

- Expanding your learning experience by working on real industry challenges with support from peers, academics, and industry practitioners
- Providing opportunities for you to develop skills (e.g. teamwork, communication, problem-solving skills) required for success in your future career by solving complex challenges in a collaborative setting
- Empowering you to solve real-life problems and get recognised by industry partners
- Supporting you to generate evidence on your creative solutions to real-world problems and employability skills for your professional profile to impress future employers

2. Tasks:

- In this project, you and your classmates will form a team to create feasible solutions to a real industry challenge provided by industry partners.

3. Assignment Format: Group Assignment

- Team size: 4-5 students
- Team formation method: self-select (i.e. you choose your own team)
- Team members: you can form a team with students from or outside of your tutorial. However, undergraduate (postgraduate) students are expected to form a team with other undergraduate (postgraduate) students only. Note as long as you all enrolled in the same course code (ACTL4305 or ACTL5305), you are allowed to form as one group.

4. Marking: 30 Marks (30% of the course total mark – note this is the nominal marks. This assignment will have spillover effect on the final exam, as final exam questions will be written partially based on the context of the Assignment.)

- 12 Marks: *Progress Mid-term Submissions (Formative assessment)*
 - Marks will be awarded based on participation and completion of milestone tasks.
 - Milestone feedback will be provided to support the development of your final solution.
- 18 Marks: *Final Solution Submission (Summative assessment)*
 - Marks will be awarded according to the marking rubrics attached in this document.

5. Deadlines:

- Team Formation: [Sunday, 11:59 pm 22 September \(Sydney Time\)](#)
- Progress Mid-term Submissions: [Wednesday, 11.59pm 9 October \(Sydney Time\)](#)
- Final Solution Submission: [Sunday, 11.59pm 3 November \(Sydney Time\)](#)

Industry Datathon Challenge: Assignment Details

"Firms have now resolved that university results are not necessarily a reliable means of identifying good new talent ... firms need (graduates who can) ... understand the needs of clients and applying creativity to identify holistic solutions."

- The Australian Financial Review, 22 July 2020

1. Overview

The project aims to enhance your career-focused learning experience by bringing in real-world scenarios and real industry challenges into the classroom, creating a safe space for you to explore, collaborate and make changes.

The assignment is intended to promote problem-based learning (PBL) in which you learn about a subject by working in teams to solve real-life problems. It is also intended to develop your skills in research and problem-solving, your ability to present your ideas concisely and coherently, and to work in groups.

Solving real-life problems is an inherently complex and messy process, but such a process also offers plenty of learning opportunities. You will learn about collaboration, working through problems persistently, seeking creative solutions, and being comfortable with changing paths where necessary.

Your experience in this project will be helpful in your transition into the professional environment – you will be prepared to leverage your existing knowledge and skills, while at the same time identify and act on knowledge and skill gaps, to respond to new challenges and seize emerging opportunities coming your way.

2. Team Formation

In this project, you and your classmates will form a team to create feasible solutions to a real industry challenge. You can form a team with students from or outside of your tutorial. However, undergraduate (postgraduate) students are expected to form a team with other undergraduate (postgraduate) students only. Students who fail to do so by the Team Formation Deadline will be randomly allocated to teams.

You are expected to form your own teams (team size: 4-5) via the “Assignment Group Self-selection” link on Moodle before the Team Formation Deadline - **Sunday, 22 September, 11:59 pm (Sydney Time).**

3. Project Deliverables

I. Final Solution Submission (18 Marks)

- Submission Deadline: **Sunday, 11:59pm 3 November 2022 (Sydney Time)**
- Only ONE Final Solution Submission is required per team.
- Project information and requirements: see **Project Briefs** on Moodle.
- Your Final Solution Submission should include:

- 1) **Submission Cover Page** (available on Moodle) signed by ALL team members.
- 2) **Reproducible Codes**: Reproducible codes for this pricing challenge with instructions on how to use them (such as RMarkdown files or R scripts with a readme file, including datasets used).
- 3) **Pricing Output**: You will be provided with a set of ~10,000 prospective customers. Use your pricing model to output a premium for each of the customers, rounded to the nearest cent. Note that a

“Sample_price_output_file.csv” is included in the Insurance Dataset (download link available on Moodle).

- 4) **Final Report:** Provide an executive summary with a report (up to 8 pages max) illustrating the problem solving process. This should include findings and decisions made from exploratory data analysis, modelling, comparison, evaluation and interpretation.
- 5) **Video Presentation:** Provide a 5-minute video presentation to the Chief Actuary, detailing the parts of the model that you believe are unique in your group’s approach and will differentiate you from the rest of the market, hence providing your group competitive advantage in the market.

- Marking criteria: See Assessment Criteria on the last page.

II. Progress Mid-term Milestone Submissions (12 Marks)

Objectives:

Progress Milestone Submissions are designed to support and facilitate your team's progress towards the delivery of your Final Solution.

Marking:

Marks for the Progress Submissions will be awarded based on participation and completion (i.e. similar to the award of marks for the StoryWall Discussion Questions) of the milestone tasks. This design aims to provide a safe environment for your team to explore different solution options and receive ongoing feedback from your peers, academics, and industry partners before submitting your Final Solutions.

Only ONE Progress Submission is required per team per milestone task.

Marking criteria:

As a formative assessment task, the Progress Submissions are designed to encourage your team to work on your project on a regular basis and provide ongoing feedback. You don't need to get the best solution right away, what counts is that your team makes a sincere attempt and learn as much as possible from the feedback.

To receive full marks for this component (12 marks), your team need to complete the 2 tasks. You are strongly encouraged to attempt the milestone tasks with your best effort to ensure that you make solid progress towards the final solution, to receive useful feedback before your final submission, and to utilise all the opportunities for your team and solutions to get recognised by the industry partners.

To complete Task 1, your team needs to:

- 1) **Share:** Share your team's milestone submission in the designated [MS Teams](#) Milestone Submission Channel (to be opened in Teams) by 11:59 pm (mid-night) of the due date (Wednesday) 9 Oct, and
- 2) **Vote:** Select two milestone submissions in the designated channel that your team like the most from other student teams by 11:59pm of the due date (Friday) 11 Oct.

Please note, detailed guidelines regarding the milestone submissions and designated submission+voting channels for each group will be announced on [MS Teams](#).

To complete Task 2, your team needs to:

Submit the 1-page summary via the **Moodle Milestone Submission Tool**, which cannot be seen by other teams by 11:59pm of the due date (Wednesday) 23 Oct.

Progress Mid-term Milestone Submission Tasks

Task	Milestone Tasks	Marks	Submission Channel	Milestone Due Date	Vote Due Date
1.	1.1 Brand & Logo: A document with a unique brand name and logo attached (png or jpg) that resonates with your target market. Explain why you chose these and why you believe it will appeal to your target market.	8 marks in total, including 6 marks for task submission and 2 marks for voting	MS Teams Channel for Milestone Submissions (Can be seen by other teams)	11:59 pm 9 Oct (Wednesday) Week 5	11:59 pm 11 Oct (Friday) Week 5
	1.2 Expected top 3 pricing factors: From the existing datasets, show in a 1-page summary the top 3 factors that you think the market is currently using to price pet insurance. Include your hypothesis on why these will be important factors and show whether your hypothesis is likely to be true with any plots or analysis that you've done.				
2.	2. Creative 3 pricing factors: Using your street smarts, develop another 3 creative pricing factors that you believe will differentiate yourself from the market. You can do this by bringing any publicly accessible data, or combining or transforming any of your existing data set. Show this in a separate 1-page summary including your hypothesis, and any plots or analysis.	4 marks	Moodle Assignment Milestone Submission Tool (Not available to other teams)	11:59 pm 23 Oct (Wednesday) Week 7	NA

4. Project Support

I. Resources:

Resources and supporting materials (e.g. Examples & 'How to' guide) are available on Moodle to help your team produce project deliverables (e.g. videos, problem statement, Poster/infographic) and complete the milestone tasks.

II. Consultation and Advice:

If your team needs help or advice on your project, please feel free to book a time to talk to your Project Advisor – Fei Huang (Lecturer) via the online 1-1 consultation booking tool on Moodle.

Please feel free to use other consultation hours available on Moodle.

III. Opportunities to Engage with Industry Partners:

- Project Introduction Session (Week 4): Industry partners will join us during our Workshop. The Webinar is designed for the industry partners to share their experiences and perspectives of the challenges in the assignment and answer your questions.

You are welcome to submit your questions before the Project Introduction Session via the form [here](#).

- Mid-project check-in meeting (Week 7): one mid-project check-in meeting will be scheduled in Week 7. Meeting details will be announced on Moodle.
- Q&A channels with industry partners.
- Milestone Submissions: top milestone submissions voted by students will be sent to industry partners for review and feedback.
- Top Groups Invited Onsite Presentation at Airtree Ventures (venture capital company in Surry Hills) in Week 10, 5pm-8pm on 14th November (Thursday). It will be an invaluable networking opportunities with industry partners and investors!

IV. Dealing with Group Issues and Conflict Resolution:

Conflict is almost inevitable when you work with others. People have different viewpoints and, under the right set of circumstances, those differences may escalate to conflict. It is common that most groups experience issues at some time. What matters is how you handle that issue or conflict. This will determine whether it works to the team's advantage or contributes to its demise.

Conflict is not necessarily a bad thing, though. Healthy and constructive conflict is a component of high-functioning teams. Conflict arises from differences between people; the same differences that often make diverse teams more effective than those made up of people with similar experience. When people with varying viewpoints, experiences, skills, and opinions are tasked with a project or challenge, the combined effort can far surpass what any group of similar individuals could achieve. Team members must be open to these differences and not let them rise into full-blown disputes.

Understanding and appreciating the various viewpoints involved in a conflict are key factors in its resolution. These are key skills for all team members to develop. The important thing is to maintain a healthy balance of constructive difference of opinion and avoid negative conflict that is destructive and disruptive.

One of the objectives of this project is to help you build communication and conflict resolution skills. The following resources are included to support you:

- [Guide to Group Work](#)
- [Identifying Group Issues](#)
- [Dealing with Group Work Issues](#)

Conflict Resolution - Optional Peer Review

If you experienced a significant unequal contribution in a team, there would be an option for your team to initiate a Peer Review Process for your group project. However, this should only

be used as a last resort. You are strongly encouraged to negotiate a resolution yourselves within the team before initiating this formal review.

This is a completely optional process for conflict resolution - teams where all members made equal contributions to the project do NOT need to undertake this exercise.

The details of the Optional Peer Review Process is available on Moodle under the Datathon Group Assignment section.

Assessment Criteria - Final Solution Submission

The Final Submission Package (including videos and reports) will be assessed holistically against the following rubrics.

Criteria	Below Expectations <50% (FL)	Meets Expectations 50% - 74% (PS - CR)	Exceeds Expectations ≥ 75% (DN - HD)
Application of relevant business knowledge and skills to identify a problem and provide a solution (5 marks)	<ul style="list-style-type: none"> Does not apply relevant business knowledge sufficiently, accurately to identify or address problems. Does not synthesise relevant knowledge or skills; or show their application to problem solving. 	<ul style="list-style-type: none"> Applies relevant business knowledge largely accurately (only minor errors) and sufficiently to identify and solve problems. Provides some (incomplete) synthesis of relevant knowledge and skills, with application to problem solving. 	<ul style="list-style-type: none"> Insightfully and accurately applies relevant business knowledge innovatively to identify and solve problems. Appropriately integrates and synthesises relevant knowledge and skills, with application to problem solving.
Development of a feasible solution process to a well-articulated problem (8 marks)	<ul style="list-style-type: none"> Does not develop a valid solution process justified by analysis, theory and/or research. Does not reference sources appropriately/accurately in reference list. 	<ul style="list-style-type: none"> Develops a plausible and realistic solution process, although it may contain some weaknesses or over-simplification, and/or limited justification. Does not sufficiently consider or evaluate differing perspectives or acknowledge limitations and constraints of own solution. References sources accurately in reference list. Referencing shows some research. 	<ul style="list-style-type: none"> Develops a creative and feasible solution process suitable for real-life application. The solution proposed is well-supported by analysis, evidence, theory, or research. Considers and evaluates differing perspectives and alternative strategies (if appropriate) and acknowledges limitations and constraints of own solution. References sources accurately in reference list. Referencing shows extensive research.
Communication (5 marks)	<ul style="list-style-type: none"> The solution submission is poorly structured and unclear. Does not engage the audience or have a sufficiently professional delivery (e.g. videos and reports). Does not use tools/technologies effectively (e.g. videos, visual aids). 	<ul style="list-style-type: none"> The solution submission is clear and well structured. Achieves some audience engagement through a sufficiently professional delivery (e.g. videos and reports). Generally, uses tools/technologies effectively (e.g. videos, visual aids) 	<ul style="list-style-type: none"> The solution submission is professional, innovative and engaging, suitable to be shared with the audience in the industry. Engages the audience effectively through a professional delivery (e.g. videos and reports). Uses tools/technologies very effectively (e.g. videos, visual aids)