

Hong Kong University of science and Technology
Academy of Interdisciplinary Studies

MG4950 T&M Consulting Project for a Corporat
FALL term of 2024-25

1. GENERAL INFORMATION

Course title:	TEMG4950N T&M Consulting Project: <u>“Meta LLM for Digital Transformation of Viu International”</u>
Course credits:	4 credits
Instructor:	Prof. Betty LIN
T.A.:	Xu Minrui, Year4 Student major in DSCT
Office & office hours:	By appointment
Class meeting:	Thursday evenings, 6:00pm to 8:50pm
Venue:	Room 5619 Lift 31-32
Course exclusion(s):	n/a
Course pre-requisite:	(1) COMP1021 (or Python programming internship) AND (2) TEMG3950 LABU2040 LABU2060 LANG2030 LANG2010 (or equivalent)
Course enrollment:	Attendance of 1st class meeting on Sep 5th is mandatory. As early as possible, interested students should use SIS to request “ <i>instructor consent</i> ” along with <ol style="list-style-type: none"> 1. latest transcript 2. CV Students who do not fulfill course pre-requisite but are confident of content knowledge and skills can still apply with a paragraph of justification. After receiving consent to enroll, students proceed with “ <i>course enrollment</i> ”. 20% of seats will be reserved for non-DDP students.

2. COURSE DESCRIPTION

TEMG4950 “T&M Consulting for a Real Client” is a series of experiential-learning courses where students role-play consultants using technology & management (T&M) strategies to solve a complex problem faced by an industry leading firm. This experiential-learning project uses the format of a consulting engagement with at least five three-hour meetings with sponsors for students to gain insight into sponsor’s industry domain, corporate culture, and operation workflow. Students will be equipped with McKinsey Engagement Methodology, relevant MECE frameworks and relevant tools for each project. In case software prototyping is involved for demonstration of key concepts such as Human Computer Interfaces or Machine Learning Algorithms, students will be

supplied with online source for self-study. Working closely with the client, subject matter experts, students will refine the solution many times for a bespoke solution that suits client's actual operation constraints and market competitive situation. Final recommendation and solution mockup or prototype, will be presented before a panel of client executives and industry subject experts. As such, no two courses are the same and students can repeat TEMG4950 consulting projects. Course credits earned range from 3 to 5 credits, depending on the complexity of each project, i.e., 4 credits for a trendy complex consulting strategy and 5 credits if it involves solution prototyping. (FYI: 1 credit is 13 hours of class-meeting plus 26 hours of self-study for a 13-week semester.)

3. CASE BACKGROUND

Viu International has an on-demand video streaming platform that heavily relies on customer relationship management (CRM) platforms to promote, market, and engage with its users. Push notification campaigns play a crucial role in driving user retention and engagement on their platform.

Advancements in marketing technology have provided marketers have more intuitive ways to interact with users. However, marketers at Viu face several challenges in this process.

One key challenge is the labor-intensive costs associated with creating messaging for push notifications. To address this, Viu employs a CRM staff in each regional office to provide localized copies of the content. By reducing the time spent on routine copywriting tasks, these CRM staff can focus on crafting more impactful messages that resonate with users. Another challenge is the resource-intensive effort required to translate these messages into different languages while maintaining the same context. Additionally, the dependency on local teams to provide message ready graphics becomes a bottleneck in the overall operation, posing yet another challenge for marketers.

4. CASE CHALLENGE

How might we develop a Copywriter Assistant to auto-generate push notifications with compelling messages and images for [a target country]?

Your challenge is to leverage the power of Meta's Llama 3 large language model (LLMs) and the Retrieval-Augmented Generation (RAG) technique to design a CopyWriter Assistant that can streamline this process. The goal is to create a solution that allows marketers to efficiently generate push notifications with compelling, country-specific messaging and visuals.

Each team will be assigned a different country:

1. *Malaysia (English --> Bahasa Malaysia)*
2. *Hong Kong (English --> Cantonese)*
3. *Philippines (English --> Tagalog)*
4. *Thailand (English --> Thai)*

You will have access to a curated dataset of push notification content, along with associated metadata and a repository of images. Using this data, you will develop some key components of the Copywriter Assistant, including the retrieval and generation modules. Each team can design a prototyping feature set for the purpose of substantiating technical feasibility and usability.

Optionally, you can consider how to evaluate the performance of the generated push notifications, and how to continuously improve the system through a feedback loop. This should be reflected in your organizational design and governance structure. This is an open-ended challenge that will require your team to think creatively, conduct thorough research, and apply your problem-solving skills to develop an innovative user-centric solution.

5. INTENDED LEARNING OUTCOME

The following topics will be addressed through lectures, workshops and/or self-directed learning. Students will learn just enough to apply the concepts to their project.

1. Ability to apply McKinsey consulting methodology for a digital transformation of target marketing process, take into consideration change impact on staff, skills, organization structure, systems, etc.
2. Improve software prototyping skills with specialization in one or more of the following areas:
 - Ability to design friendly user interface for non-technical marketers.
 - Ability to train Meta Llama 3 model for marketing style of message generation.
 - Ability to use LLM for image generation, e.g., Midjourney or StableDiffusion.
3. Improve persuasive presentation to a judging panel of business and technical executives.
4. Improve ability to teamwork within multi-disciplined and multicultural setting.

6. COURSE GRADE

Assessment Methods	Description	Weight (%)
Individual Assignments	Class attendance and in-class contribution. Self-study marketing and LLM material	25%
Team-based Assignments	Project preparation, Design Thinking work products and interim reports	20%
Final Deliverables	Final consulting report recommendations, prototype code and Q&A handling	35%
Peer assessment(s)	3 rounds of anonymous performance feedback by teammates	20%
	Total	100%

7. COURSE SCHEDULE

Regular class meeting time is Thursday evenings from 6:00pm to 8:50pm plus private coaching per student-consultant team by either the course instructor or project mentor from the sponsors. Classes

will be held in-person on campus or at the client's office. Attendance and active in-class participation will be graded. Tentative class meeting plan:

1. W01 Sep 05: Course overview, LLM key concepts, and student selection
2. W02 Sep 12: Preparation I: Marketing & CRM
3. W03 Sep 17: Preparation II: Consulting Methods for Project Planning & Team Formation
4. W04 Sep 24: Preparation III: Llama 3 Training
5. W05 Oct 03: Project Kick-off with Viu Marketing + Stakeholder Interviews
6. W06 Oct 10: Digital Transformation Engagement Sharing
7. W07 Oct 17: Project Deep-dive via Design Thinking Workshop
8. W08 Oct 24: Advanced Topics: Business Case Justification & Prompt Engineering
9. W09 Oct 31: 1st Draft Proposal Review – Instructor + T.A.
10. W10 Nov 07: 2nd Draft Proposal Review – Instructor + Marketing faculty
11. W11 Nov 14: 3rd Draft Proposal Review – Viu Copywriters
12. W12 Nov 21: Dressed rehearsal in lecture theatre – Viu Digital Marketing Head
13. W13 Nov 29 (Fri): Final presentation – Viu Executive Sponsors + Industry Experts

8. COURSE POLICY (regarding plagiarism, copyright, academic honesty, attendance, etc.)

Course policies will strictly follow HKUST policies. Cheating, dishonesty, and plagiarism will not be tolerated at any time and may result in strict sanctions.

1. **Attendance:** Please be punctual in class. Late arrival by more than 5 minutes or early departure will be marked as absent unless student notifies instructor at least 24-hour in advance with legitimate reasons plus supporting evidence.
2. **Participation:** Active participation is required and is an important part of the grade. Students are required to make at least one suggestion, comments, and question per class meeting. This can be done in person or online via Zoom chat.
3. **Beeping devices:** mobile phones and other beeping devices need to be turned off or put on silent mode. Portable computers, laptops and tablets are allowed so long as they do not lead to inappropriate behavior and disturbance.
4. **Video recording:** recording may be arranged by the School and the Instructor. Any other recording (photo, audio, or video) is strictly prohibited. Lectures are the copyright property of the Instructor. Any recording can only be produced with the express consent of the instructor.
5. **Exam:** There will be no make-up exam. Unexcused absence will result in zero grading for that test. Students are advised to contact the instructor prior to week 3 to negotiate schedule conflicts with other courses, especially during mid-term time.
6. **Course materials and handouts:** Course materials will be posted on the University's CANVAS, please check the website on a regular basis for new postings. **The Lecture notes are the copyright property of the instructor and are provided for the sole private use of the**

students. They may not be reproduced or disseminated without the express consent of the instructor.

9. GENERAL INTENDED LEARNING OUTCOMES

T&M Dual-degree Program's Intended Learning Outcomes

1. P-ILO1: Adopt an inter-disciplinary approach to tackle complex real-world problems.
2. P-ILO2: Communicate effectively with people of different levels and work areas.
3. P-ILO3: Transfer acquired knowledge to meet changes and challenges in different fields.
4. P-ILO4: Engage in activities that lead to impact of social improvement.
5. P-ILO5: Be able to create and innovate with divergent thinking.
6. P-ILO6: Be able to apply technical and business skills in an integrated manner in problem-solving.
7. P-ILO7: Be a leader in the field of technology management and innovation, and entrepreneurship.

TEMG4950 Course Intended Learning Outcomes

1. Acquire insight into project sponsor's organization and empathy with their challenges (P-ILO3)
2. Become familiar with technology trends and industry landscape (P-ILO1, P-ILO4)
3. Gain confidence to apply problem solving techniques covered in the course (P-ILO1, P-ILO5, P-ILO6)
4. Improve professional communication in writing and public speaking (P-ILO2, P-ILO7)
5. Improve teamwork across cultures, age and disciplines (P-ILO5)