**MIS3011 Course Schedule & Timeline**

**Class Time:** Tuesdays/Thursdays 3:30-4:50pm  
**Duration:** September 1 - December 13, 2025

**Venue**: TD-105

| **Week** | **Date** | **Key Topics** | **Labs** | **Special Activities** | **Submissions/Milestones** |
| --- | --- | --- | --- | --- | --- |
| 1 | Sep 2&4 | * Course Overview * An Overview of Modern AI Technologies | * Introduction to Python and Colab |  |  |
| 2 | Sep 9&11 | * Fundamentals of Creating AI-driven Solutions | * Data Exploration with Airbnb Data |  | **Group Formation Begins** |
| 3 | Sep 16&18 | * Introduction to GenAI and AIGC Strategies * Open the Black Box of LLMs | * Launch your first website in 30 minutes |  | **Assignment 1 Due (Sep 18)** |
| 4 | Sep 23&25 | * GenAI Project Lifecycle I | * Introduction to Dify | * Invited Talk by Co-founder of Dify |  |
| 5 | Sep 30&Oct2 | * GenAI Project Lifecycle II | * Build RAG-based chatbots on Dify | * National Day Holiday |  |
| 6 | Oct 7&9 | * GenAI Project Lifecycle III | * Build agentic workflow on Dify | * National Day Holiday * Invited Talk by SME student (GenAI project) | **Project Plan Due (Oct 12)** |
| 7 | Oct 14&16 | * GenAI Project Lifecycle IV * **Midterm Review (NO EXAM)** | * Build chatflow on Dify | * Project Consultation |  |
| 8 | Oct 21&23 | * Logistic Regression in Business Decision-Making | * Customer Churn Prediction I | * Invited Talk by SME students (AI internship) | **Assignment 2 Due (Oct 23)** |
| 9 | Oct 28&30 | * Neural Networks and Deep Learning | * Customer Churn Prediction II |  |  |
| 10 | Nov 4&6 | * AI Vision Systems | * Hot Dog vs. Not Hot Dog with CNNs |  |  |
| 11 | Nov 11&13 | * Fast and Efficient AI * AI Language Systems I | * A cat vs. dog image classifier |  | **Assignment 3 Due (Nov 13)** |
| 12 | Nov 18&20 | * AI Language Systems II | * Analyzing movie review sentiment |  |  |
| 13 | Nov 25&27 | * On-device and Cloud AI * Responsible AI | * Implementing hand gesture recognition |  |  |
| 14 | Dec 2&4 | **Course Review**  **Project Presentations** |  |  | **Presentation Slides Due (Dec 3)**  **Assignment 4 Due (Dec 6)** |
| 15 | Dec 9&11 | **Final Exam** |  |  | **Final Report Due (Dec 14)** |

Tentative. Any changes will be announced via BB.

* Instructor
  + **Guo Yutong (郭羽童)**
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* TA
  + **Mr. Lu Huxi (陆胡熹)**
  + [**luhuxi@cuhk.edu.cn**](mailto:luhuxi@cuhk.edu.cn)
* USTF
  + **Mr. Yang Yixin (杨易鑫)**
  + [**yixinyang@link.cuhk.edu.cn**](mailto:yixinyang@link.cuhk.edu.cn)
* Office hours
  + Yutong (guoyutong@cuhk.edu.cn): Friday 2:00-3:00pm @ TxD-609 /by appoinement
  + TA Lu Huxi (luhuxi@cuhk.edu.cn): Tuesday 2:00-3:00pm @ TxD-6F (seat 01)
  + USTF Yang Yixin (yixinyang@link.cuhk.edu.cn): Thursday 10:30-11:30am @ Startup zone library L103
* **This course is designed for business students who want to**

**Theoretically:**

* + Grasp how various AI technologies are applied in modern business practices.
  + Learn how to leverage AI models and tools for business problem-solving.
  + Prepare for AI-driven business environments.

**Practically:**

* + **Gain hands-on project experience** by building multiple AI mini-projects.
  + **Secure AI internships**: Develop the exact skills that firms look for in AI product, operations, and ML-based BA roles.
  + **Excel in graduate school applications**: Create a compelling profile for Master degrees in AI-related fields.

Core Modules

Skill Pillar 1: Predicting the Future with Data

You will…

* + Master **Logistic Regression** for business decisions and get a deep dive into **Neural Networks** and **Deep Learning**.
  + Build a **customer churn prediction model** for a bank.
  + Act as a data scientist to build a model to **predict personal loan offer acceptance**.

Skill Pillar 2: Teaching Computers to See

You will…

* + Learn about powerful **Convolutional Neural Networks (CNNs)** and the highly efficient technique of **Transfer Learning**.
  + Build a **"Hot Dog/Not Hot Dog" image classifier** from scratch and then use transfer learning to build **a cat vs. dog classifier**.
  + Develop and evaluate **a touchless hand navigation control system**, using the **MediaPipe** framework.

Skill Pillar 3: Mastering the Language of AI

You will…

* + Learn about essential techniques for **Natural Language Processing**.
  + Use the powerful **Hugging Face** library to perform NLP tasks like **sentiment analysis** with just a few lines of code.
  + Look inside the **black box of LLMs** , from **Transformers** to the **GenAI Project Lifecycle**.

**Selected Learning Objectives**

* **Master Core AI Concepts and Techniques**
  + Build a comprehensive understanding of AI, from machine learning to deep learning to Gen AI.
  + Learn to identify business challenges and design AI-powered solutions.
* **Develop Hands-On Technical Skills**
  + Gain practical, hands-on project experience by building AI applications.
  + Discover, test, and leverage state-of-the-art AI models and platforms used in the industry.
* **Apply Professional AI Skills for Your Career**
  + Develop effective communication and collaboration skills for leading AI-powered projects.
  + Build a strong foundation for advanced studies or professional roles in BA, DS, and AI.
* Every week, **TWO** sessions blend
  + **Lectures paired with labs**
    - Hands-on coding or low-code development labs
    - **Key**: grasp the high-level logic of the code
  + **Students’ sharing** (not mandatory, mentioned again in Grading)
  + Special talks
  + Talk by the co-founder of Dify
  + **AI Project sharing** from previous students
  + **AI Internship sharing** from previous students
    - Those who took my courses last semester and obtained AI-related internships in this summer.
* Required
  + **Lecture slides and lab materials**
* Programming & software
  + Python & [Dify](https://dify.ai/)
  + [Google Colab](https://colab.research.google.com/)
  + AI-powered coding assistants
    - [Cursor AI](https://www.cursor.com/)/ [GitHub Copilot](https://github.com/features/copilot)

**Grading**

* Participation (10%)
  + **In-class participations (5%)** 
    - Answer or ask questions during class
    - Remember to sign-in with the TA!
    - **“Participating by Sharing”**
      * Guideline: [MIS3011\_Guideline for in-class sharing](https://cuhko365-my.sharepoint.com/:b:/g/personal/guoyutong_cuhk_edu_cn/EZCRUpYXyoRGpIsTnGkr_fEB5QEkUN6opD_FI1815lOJCw?e=nEpsTk)
      * **How to Sign Up**: A sign-up sheet https://cuhko365-my.sharepoint.com/:x:/g/personal/guoyutong\_cuhk\_edu\_cn/EZnNyJJTQwFHjkkujFPXU\_IBbhpYw8Z8KnuOogO5J9QfQg?e=8qg1kg.
  + **Attendance (5%)** The TA will randomly sample attendance **10** times throughout the semester.
* Individual Assignments (20%)
  + 4 assignments
  + Using Python/Colab and Dify
  + You are allowed one “late day” for the semester across the individual assignments. This means you can submit one of the assignments up to 48 hours late without any penalty.
  + After using your "late day", a penalty of 10% of marks per day will be applied.
* Final Exam (40%)
  + **Closed-book**
    - All materials from readings, project, assignments, and class discussions may be covered in the exam.
  + **Paper-based**
  + **Last teaching week** (before the centralized exam week)
    - Likely Dec 9 or 11
* Group Project (30%)
  + Members per group: **3-4 students**
  + You will identify a **specific, well-scoped** business problem and design a **practical solution** that strategically integrates **2-3 complementary AI technologies**.
  + Guideline: [MIS3011\_GroupProjectGuideline\_Fall2025\_V2](https://cuhko365-my.sharepoint.com/:b:/g/personal/guoyutong_cuhk_edu_cn/Ef44n45MxAFJibKxu_yzSzIBK0luWFBUk9huY2t0Bq9fKA?e=pMxxP1)

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Component** | **Weight of Course Grade** | **Deadline** | **Page/ Time limit** |
| Project Plan | 5% | 11:59pm, Oct 12, 2025 | **3 pages** |
| Project Presentation | 8% | 11:59pm, Dec 3, 2025 | **15 mins** |
| Project Final Report | 15% | 11:59pm, Dec 14, 2025 | **12 pages** |
| Peer Evaluation | 2% | 11:59pm, Dec 14, 2025 | **-** |

* + Late project submissions will result in 10% reduction per day late.

Frequently Q&A