Title (Units): **COMP4929 Artificial Intelligence Project II (3,0,9)**

Course Aims: To enable students to demonstrate an integrated understanding of artificial intelligence principles and techniques through solving a real-life domain-specific problem; to enable students to gain practical experiences of developing and applying AI technologies; to enable students to acquire independent and timely problem solving skills as well as oral and written communication skills.

Prerequisite: COMP4928 Artificial Intelligence Project I

Course Intended Learning Outcomes (CILOs):
Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
	Knowledge
1	Integrate AI principles and techniques
2	Gain practical experiences of developing and applying AI technologies
	Transferable Skill
3	Solve practical domain-specific problems independently via timely AI techniques in a systematic way
4	Demonstrate organizational and time-management skills
5	Write technical reports and make effective presentations
	Attitude
6	Develop professional attitude towards AI technologies

Calendar Description: Students will engage in a highly independent problem solving activity under the supervision of a faculty member. Students are expected to gain practical experiences of applying AI principles and techniques acquired from the Programme to the solution of a real-life domain-specific problem. The project demands careful planning and timely applications of underlying theories and enabling technologies. A final report and an oral presentation are required upon successful completion of the project.

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1 - 6	Students will engage in a highly independent problem solving activity under the supervision of a faculty member

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	Continuous Assignments	30%	1 - 6	This category covers the assessment of the attitude of the student, the amount of effort the student has put into the project, self-discipline, creativity, and the general skills in the AI solution development process. The progress reports are also assessed in this category.
2	Thesis	50%	1 - 5	The grade for this category reflects the quality and the amount of completed work that includes the project report and, if any, the system. Efficiency, effectiveness and robustness of the solution will be graded in this category. This category also assesses the presentation of the report. The student is expected to show a clear understanding of the problem, the techniques to solving the problem, and the results of the project.
3	Oral Presentation	20%	5	This category includes an oral presentation of the project and a demonstration if applicable.

				Communication and presentation skills are emphasized.

Assessment Rubrics:

Excellent (A)	• Achieve the first five CILOs, demonstrating an excellent mastery of problem solving, report writing and oral presentation skills • Demonstrate an integrated understanding of various AI principles and techniques, and apply them to solve real-life domain-specific problems • Organize the AI development tasks in different phases with detailed plans and always complete the tasks effectively as planned • Able to fully document the project with high-quality presentation of materials, ideas and results, and highlight student's own contribution to the project with solid rationales • Able to present the project orally with accurate and sound explanations, possibly accompanied with well-prepared demonstrations
Good (B)	• Achieve the first five CILOs, demonstrating a good mastery of problem solving, report writing and oral presentation skills • Demonstrate an integrated understanding of AI principles and techniques, and effectively apply them to solve new real-life domain-specific problems • Organize the AI development tasks in different phases with plans and mostly complete the tasks effectively as planned • Able to mostly document the project with good-quality presentation of materials, ideas and results, and highlight student's own contribution to the project with proper rationales • Able to present the project orally and visually with clear explanations, possibly accompanied with sufficient system demonstrations
Satisfactory (C)	• Achieve most of the first five CILOs, demonstrating a moderate mastery of problem solving, report writing and oral presentation skills • Demonstrate an integrated understanding of some AI principles and techniques, and apply them to solve familiar real-life domain-specific problems • Plan and organize the AI development tasks in different phases and moderately complete the tasks • Able to adequately document the project with quality presentation of materials, ideas and results, and highlight student's own contribution to the project • Able to present the project orally and visually for the most part, possibly accompanied with adequate system demonstrations
Marginal Pass (D)	• Achieve most of the first five CILOs, demonstrating a minimal level of mastery of problem solving, report writing and oral presentation skills • Demonstrate a basic understanding of some AI principles and techniques, and apply them to solve simple real-life domain-specific problems • Have a plan for the AI development tasks and complete a limited number of tasks • Document the project with minimal presentation of materials, ideas and results • Able to make oral presentation and system demonstration (if applicable) of the project for a limited part

Fail (F)	• Achieve less than three of the CILOs, and demonstrating little mastery of problem solving, report writing and oral presentation skills • Have little understanding of AI system principles and techniques, and have difficulty in applying them to solve real-life domain-specific problems • Have no plan for the AI development and fail to develop a workable solution • Have no or minimal documentation of the project • Unable to make oral presentation or system demonstration of the project

Course Content and CILOs Mapping:

Content		CILO No.
I	Project	1 - 6

References:

- Literature research appropriate to the topics under study

Course Content:

Topic

I. Project