Course Competency

CAI 2921C Artificial Intelligence Applications Solutions

Course Description

A lower division course for students majoring in Applied Artificial Intelligence (AI). Students will demonstrate competence to scope, acquire/explore data, model, evaluate, and deploy an AI/machine learning solution in a team environment. Students will create and present a code or no-code AI solution. Must be taken during the last semester before graduation. (2 hr. lecture 2 hr. lab)

Course Competency	Learning Outcomes
Competency 1: The student will display effective communication and team building skills in an AI project by:	1. Communication
1. a) Selecting the project team members and defining their respective roles and responsibilities. b) Developing a mechanism for clear and consistent communication among team members. c) Setting clear goals and objectives to monitor the team's ongoing effectiveness.	
Competency 2: The student will successfully formulate project requirements and a statement of work by:	1. Communication 2. Numbers / Data 3. Critical thinking 4. Information Literacy 5. Social Responsibility 6. Ethical Issues 7. Computer / Technology Usage
1. a) Determining project purpose and the scope of work to be conducted. b) Planning the project deliverables and the respective timeline with milestones. c) Selecting quantifiable criteria that must be met for the work to be acceptable and approved. d) Delivering a formal report following the assigned format and style. e) Presenting their project to the college	

community. f) Describing the importance of security technologies, processes and practices appropriate for the project.	
Competency 3: The student will develop AI solutions to satisfy project requirements by:	1. Numbers / Data 2. Information Literacy 3. Social Responsibility 4. Ethical Issues 5. Computer / Technology Usage
1. a) Applying Human-Centered Design, Socially Responsible Computing, and Design Thinking to develop and implement an AI solution. b) Using the AI project lifecycle process: problem definition, data acquisition, data exploration and visualizations, model development, evaluation, and deployment. c) Implementing an AI solution demonstrating the use of Dashboards, Data Visualization, and the design of Machine Learning Models. d) Documenting each lifecycle phase following the assigned format and style. e) Using AI models to solve common industry applications (Supervised, Unsupervised and Reinforce Learning)	
Competency 4: The student will articulate issues related to AI projects by:	1. Information Literacy 2. Social Responsibility 3. Ethical Issues 4. Computer / Technology Usage
1. a) Assessing the unique attributes and diverse nature of AI solutions. b) Examining recent trends affecting AI applications. c) Exploring ethical considerations and the potential pitfalls of implementing AI solutions in society.	

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