ARAB ACADEMY FOR SCIENCE, TECHNOLOGY, AND MARITIME TRANSPORT

(SMART VILLAGE CAMPUS)

Software Engineering Program (Bachelor)

Summary of Capstone Projects (Standards and Constraints)

#	Project Name	Project Description	Standards and how they are are incorporated in the project phases	Constraints and how they are are incorporated in the project phases
1	AI Call Center Agent	This project will implement an AI call center solution to improve student services at AAST College. The AI system will be able to handle common student inquiries without requiring human agents as much as possible. It will be in English. The AI call center will utilize natural language processing and machine learning to understand and respond to student questions on the phone. It will leverage dialog systems and knowledge bases to provide consistent and accurate answers for frequently asked questions on topics like course registration, tuition payments, department information and more.	Planning Phase: Standards: - Follow industry standards for call center systems, such as ISO for speech recognition accuracy. - Incorporate accessibility standards for disabled users. Analysis Phase: Standards: - Leverage frameworks like CCXP to map out overall call center customer journey. - Conduct user research using standard qualitative methods. Design Phase: Standards: - Adhere to established call interaction design standards. - Use standard data model for capturing call metadata.	Planning Phase: Constraints: - Prioritize high frequency student inquiries to focus scope. - Data storage and usage compliant with applicable regulations. Analysis Phase: Constraints: - User studies limited to currently enrolled AAST students only due to accessibility. - Dialog system scope constrained to most common student questions. Design Phase: Constraints: - Metadata database capabilities limited to existing college infrastructure. - IVR menu depth kept to 2 levels based on cost.

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			Development Phase: Standards: - Utilize widely used dialog system frameworks to accelerate build. - Ensure recording and speech analytics formats are standard. Testing Phase: Standards: - Leverage user acceptance testing best practices. - Measure system against standard call center metrics.	Development Phase: Constraints: - Speech recognition trained on Gulf region dialects. - Student data availability limited per security rules. Testing Phase: Constraints: - Initial testing is limited to internal team only. - Performance measurement focused on high priority inquiry areas.