Department of Technical Education
Capstone project

Time - line schedule

Capstone project Name: AI Smart Mirror Using Raspberry Pi 3B+

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Phase 1: Planning and Design (Weeks 1-3)

- Task 1: Define project scope and objectives (Week 1)
- Task 2: Create project plan and schedule (Week 1-2)
- Task 3: Design hardware components and order materials (Week 2)
- Task 4: Design software architecture and user interface (Week 2-3)

Phase 2: Development (Weeks 4-10)

- Task 1: Build hardware prototype and perform testing (Week 4-6)
- Task 2: Install raspian operating system (Week 4-6)
- Task 3: Develop Face recognition and voice recognition program (Week 6-8)
- Task 4: Develop user interface and perform testing (Week 6-8)
- Task 5: Integrate software and hardware components (Week 8-9)
- Task 6: Perform integration and system testing (Week 9-10)

Phase 3: Documentation and Quality Assurance (Weeks 11-12)

- Task 1: Create user manual and installation guide (Week 11)
- Task 2: Develop test plan and perform unit testing (Week 11-12)
- Task 3: Perform integration testing and system testing (Week 11-12)
- Task 4: Perform acceptance testing (Week 12)

Phase 4: Deployment (Weeks 13-14)

- Task 1: Deploy the smart mirror into production (Week 13)
- Task 2: Provide user training and support (Week 13-14)
- Task 3: Perform ongoing maintenance and upgrade

CRITICAL PATH

The critical path for the AI Smart Mirror project would be the series of tasks that must be completed on time in order to meet the overall project deadline. The critical path is determined by identifying the longest sequence of tasks that cannot be delayed without delaying the overall project completion. Here is a possible critical path for the project:

- **Week 1-2:** Define project scope and objectives, create project charter and project plan, set up project management tools and resources.

- **Week 3-5:** Design hardware components and order materials, design software architecture and user interface, create detailed project schedule and task list, define project risks and mitigation plan, establish quality assurance and testing plan.

- **Week 6-11:** Build hardware prototype and perform testing, install and configure raspian operating system and voice recognition program, develop face recognition program, develop application integration program, develop user interface and perform testing, integrate hardware components, perform integration and system testing, complete development work and obtain necessary approvals.

- **Week 12-14:** Create user manual and installation guide, develop test plan and perform unit testing, perform integration testing and system testing, perform acceptance testing, deploy the smart mirror into production.

In this critical path, any delays in the tasks during Weeks 1-5 could result in a delay to the overall project schedule. Similarly, any delays during Weeks 6-11 could cause a delay to the overall project schedule. The tasks during Week 12-14 are also critical, as they ensure that the system is properly documented, tested, and approved before deployment into production.

Date:

Signature of the student

Signature of the cohort owner