Work Plan (WBS)

The AI-Based academic Advisor project initiates with requirements, gathering and stakeholder participation, which will take about 7 days. In this phase, we will conduct interviews with key stakeholders-students, academic advisors, and university administration-to define the project's expectations and objectives. This initial engagement will provide a basic for drafting a comprehensive software requirements specifications (SRS) document, capturing a project' s essential features and functionalities.

AI Model design and development phase: Schedule to span six weeks, the team will focus on designing machine learning algorithms, natural language processing (NLP) models, and analytics tools to tailor recommendations for academic advising. Additionally, the team will recast the knowledge based on academic programs, course requirements, and student data sources, which will drive the AI's recommendations.

SYSTEM INTEGRATION AND BACK-END DEVELOPMENT: Estimated to about eight weeks. Here the development team will make the backend infrastructure, integrating the AI system with the SIS and learning management system (LMS) for seamless data access. Cloud servers will be configured to support data storage and AI model processing. In parallel, **the Fronted end development and UI** design phase will create a responsive, user-friendly interface for students and advisors, optimized for both desktop and mobile.

QUALITY ASURANCE AND TESTING: spanning around four weeks, will rigorously test the platform's functionality, stability and scalability. QA specialist will conduct regression testing, functional testing, and acceptance testing to validate that the system meets the performance expectations.

PILOT TESTING AND FEEDBACK COLLECTON/TRAINING AND DEVELOPMENT PREPRATIONS: During the fourth month, the pilot testing and feedback collection phase will launch the platform to a small group of users for real-world feedback, which informs final adjustments. Simultaneously, the Training and development preparation phase will provide tutorials, workshops, and training materials to ensure that both students and academic advisors can use the system efficiently. This phase will confirm with GDPR and FERPA data protection standards.

FULL SYSTEM DEVELOPMENT: is scheduled for February 2025, after which the platform will be available for all users, supported by ongoing technical support to maintain optimal performance. The total project budget is estimated at $495,000, including all development, testing, training, and support costs.

SERVICE LEVEL AGREEMENTS (SLA's)

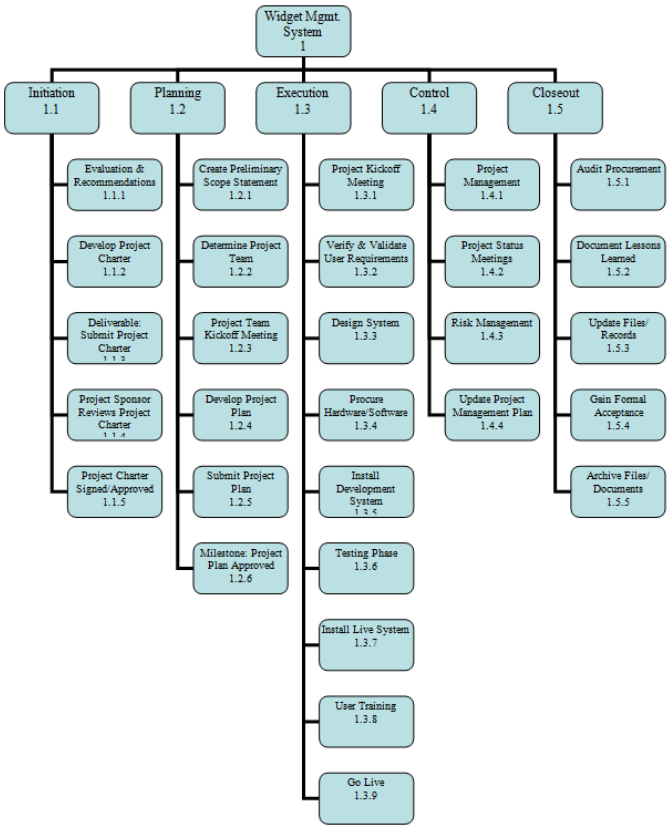
1. **Uptime:** The platform should be accessible 99.5% of the time, especially during peak usage periods.
2. **Response Times:** technical support should respond to critical issues within 5 hours and non-critical issues within 24hours.

3. **Data Privacy:** The platform must adhere to GDPR and FERPA regulations.
4. **Performance:** Key performance indicators like system speed and accuracy will be monitored.

WBS (WORK BREAKDOWN STRUCTURE):
The project is divided into the following phases:

1. **Requirements analysis:** Gathering and Documenting stakeholder need.
2. **AI Model development:** Designing, training, and testing the AI model.
3. **Backend Development:** Integrating the system with existing systems like SIS and LMS.
4. **Frontend development:** Designing and developing the user interface.
5. **Quality Assurance and Testing:** Ensuring the system's functionality and reliability.
6. **Pilot testing and Feedback:** Launching a pilot version and gathering user feedback.
7. **Training and Deployment Preparation:** Developing training materials and ensuring compliance.
8. **Full Deployment and Support:** Launching the full system and providing ongoing support.

By combining a well-defined WBS with rigorous SLA's the program aims to deliver a reliable, efficient and compliant AI-based academic advisor platform.



Project Timeline: -

Phase	Timeline	Description
Phase 1: Requirements Gathering	Nov 1 - Nov 7, 2024	Identify and validate user requirements, finalize SRS.
Phase 2: AI Model and System Design	Nov 8 - Dec 31, 2024	Develop AI models, design system architecture, create UI prototypes, and integrate data.
Phase 3: System Integration and Testing	Jan 1 - Jan 31, 2025	Integrate system with university databases, perform rigorous testing, and ensure quality standards.
Phase 4: Pilot Rollout	Feb 1 - Feb 15, 2025	Deploy the system to a selected group of students and advisors, collect feedback, and make necessary adjustments.
Phase 5: Full Implementation and Training	Feb 16 - Feb 28, 2025	Deploy the system to all users and provide training to students and academic advisors.

Milestones and Deliverables: -

Milestone	Description	Deliverables
Requirements Gathering Completed	SRS and stakeholder interviews completed and validated.	SRS, stakeholder feedback
AI Model and System Design Completed	AI model prototypes and system design finalized.	System architecture design, AI model design, UI prototypes
System Integration and Testing Completed	Successful integration with university systems and preliminary testing.	Integrated system with testing documentation
Pilot Rollout Completed	Pilot phase completed, with feedback collected and analyzed.	Feedback report, system updates based on pilot results
Full Implementation and Training Completed	System fully deployed, with training provided to all users.	Deployed system, training materials, documentation for users

Task Breakdown and Tracking (JIRA)

Each deliverable will be broken down into tasks tracked in JIRA. Tasks will include assignments for each team member and time estimates:

1. AI Model and System Design Development:
    - Task 1: Develop recommendation algorithm – 20 hours
    - Task 2: Train model with sample academic data – 30 hours
    - Task 3: Integrate NLP for interactive advising interface – 25 hours
    - Task 4: Test and validate AI model accuracy and performance – 20 hours
2. System Integration with University Systems:
    - Task 1: Begin data integration with Student Portals – 15 hours
    - Task 2: Integrate with Learning Management System (LMS) – 20 hours
    - Task 3: Configure APIs for seamless data exchange – 15 hours

- Task 4: Perform integration testing for data consistency – 12 hours

3. Frontend Design:
    - Task 1: Design student dashboard interface – 15 hours
    - Task 2: Design academic advisor dashboard interface – 12 hours
    - Task 3: Conduct user experience testing and gather feedback – 10 hours
    - Task 4: Improve UI based on user testing feedback – 8 hours
4. Data Privacy and Security:
    - Task 1: Implement data encryption for student records – 12 hours
    - Task 2: Set up user access controls for secure access – 10 hours
    - Task 4: Guarantee compliance with GDPR and FERPA standards – 10 hours
5. Testing and Quality Assurance (QA):
    - Task 1: Unit testing for separate components – 25 hours
    - Task 2: Integration testing with all system components – 20 hours
    - Task 3: Perform UAT (User Acceptance Testing) – 18 hours
    - Task 4: Review tests and make necessary changes – 12 hours
6. Deployment and Pilot Implementation:
    - Task 1: Set up production environment on cloud – 12 hours
    - Task 2: Deploy the system for pilot group access – 10 hours
    - Task 3: Gather user feedback during the pilot phase – 8 hours
7. Project Closure:
    - Task 1: Conduct final review and seek for approval from stakeholders – 10 hours
    - Task 2: Collect lessons learned for project assessment – 8 hours
    - Task 3: Submit the project closure report – 7 hours

The total number of hours sum up to 364 hours that fit comfortably in a 4-month project timeline.

Gantt Chart

The project will follow the below schedule for different phases and achieve milestones.