StudyPilot

Group 3

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VISION STATEMENT

The StudyPilot System will be used to support academic instruction by reducing the administrative workload associated with teaching university-level courses. The system will assist instructors by automating repetitive student support tasks and by generating course-related materials from existing instructional content. StudyPilot will operate as an academic workflow tool that assists, rather than replaces, instructor decision-making and tasks.

The system will analyze pre-existing lecture slides and course notes uploaded by the instructors to generate quizzes, assignments, surveys and study guides. Generated materials will be explicitly aligned with course learning objectives that are identified within the uploaded instructional content. Instructors will be able to review, edit, and approve all automatically generated materials before and during release to students. Study guides generated by the system will be displayed within the interface and may be updated as additional course data becomes available.

The system will also manage student questions through a communication interface. Instructor responses to student inquiries will be recorded and reused to support future interactions when similar questions are flagged. This functionality is intended to reduce repetitive communication while ensuring that students receive consistent and instructor-approved guidance. The system may organize and prioritize student inquiries based on content and frequency. The instructor will have access to personalize the sorting system of these emails. StudyPilot will provide instructors with summarized information about student interactions and performance, allowing them to identify topics that students find difficult. It will provide group base organisation based on the requested surveys by instructors.

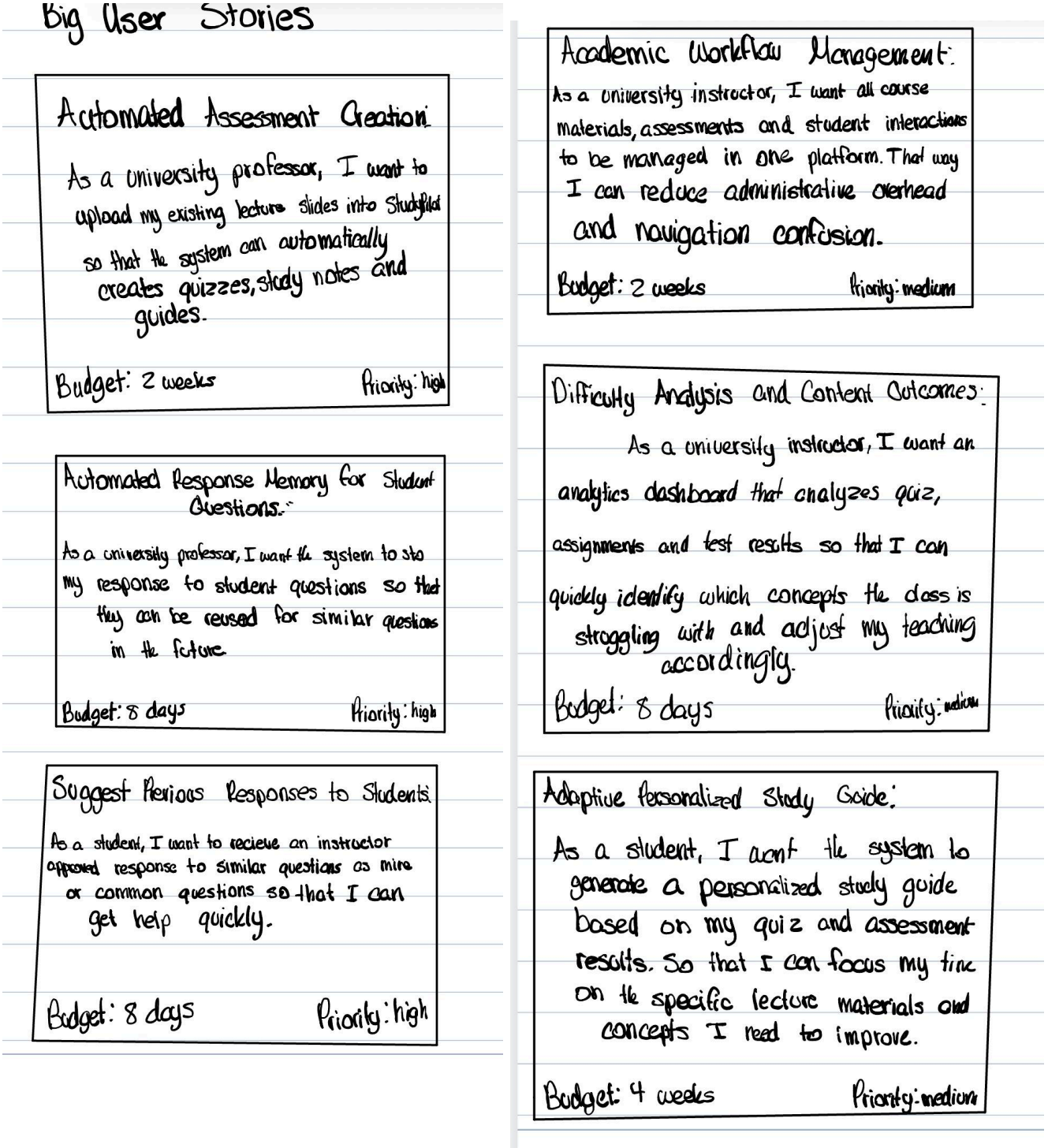
The primary users of the system will be university professors, lecturers, and teaching assistants responsible for managing course content and student communication. Students will interact with the system to receive course materials and responses to questions, though some system functions will be restricted to instructional staff. The system is intended to support large or content-heavy courses where administrative demands are significant.

In the initial release, the system will operate using simulated or non-persistent data storage. Future versions of the system may integrate with learning management systems such as Canvas, Moodle, or Blackboard and may include more advanced analytics and personalization features. The system is envisioned as a web-based application with the possibility of future extensions.

The StudyPilot System represents an improvement over existing tools that require instructors to manually create assessments and repeatedly answer similar student questions across multiple platforms. StudyPilot aims to simplify instructor workflows and reduce time spent on administrative tasks.

The project will be considered successful if instructors report reduced time spent on repetitive communication and assessment preparation, improved consistency in student support, and overall preference for the system compared to existing workflows. The system is intended to adapt to future AI technologies as they become available.

BIG USER STORIES



USER STORIES

Instructor Question and response Management

The system shall allow a student question to be created and stored in memory

Budget: 3 days

Priority: high

Basic Instructor GUI

The system shall display a list of submitted student questions.

Budget: 5 days

Priority: high

Instructor Question and Response

The system shall allow an instructor to reply to a student question.

Budget: 3 days

Priority: high

Data Storage

Have a storage system to be replaced with real database in futon iterations

Budget: 8 days

Priority: low

Unit testing for Domain and logic

The system shall include unit tests for similarity matching logic.

Budget: 5 days

Priority: medium

Basic GUI

Allow instructor to enter and seve a response

Budget: 5 days

Priority: medium