

Capstone Weekly Status Report 3

Date and Time: September 21, 2025

Student Name: Satwik Alla

Capstone Project: Intelligent Accessibility Content Converter for Educational Institutions

Capstone Sponsor: No confirmed sponsor - proceeding with Professor Samarah's guidance for students without secured partnerships

Capstone Advisor: Prof. Mohammad Samarah & Prof. Melissa Sahl

Status Details:

Work accomplished this Week

- 1) Final Proposal Completion: Developed comprehensive 15-user story technical specification for AI-enhanced accessibility system addressing educational content conversion challenges.
- 2) Sponsor Search Documentation: Compiled systematic outreach records for 12 organizations with detailed contact information, response tracking, and lessons learned analysis per professor requirements.
- 3) Technical Architecture Design: Created modular microservices architecture plan integrating React.js frontend, Python/Django backend, and AI services (OpenAI, Google Cloud Vision).
- 4) Requirements Engineering Framework: Established stakeholder interview protocols and accessibility compliance testing procedures.
- 5) Project Scope Refinement: Transitioned from broad organizational efficiency focus to specialized accessibility technology solution based on research findings and institutional needs assessment.
- 6) Risk Assessment: Developed comprehensive 3-month implementation timeline with alpha, beta, and final checkpoint deliverables.

Work Planned for Next Week

- 1) Final Proposal Submission: Complete proposal submission by September 22nd deadline with all required documentation per handbook specifications

- 2) Technical Environment Setup: Establish Git repository structure, development environment configuration, and initial project documentation framework
- 3) Literature Review Initiation: Begin comprehensive analysis of existing accessibility tools and competitive landscape assessment
- 4) Stakeholder Research: Conduct preliminary research on UMBC accessibility services and potential user interview candidates
- 5) Technology Evaluation: Assess AI service options and integration requirements for text-to-speech, OCR, and image description capabilities
- 6) Alpha Checkpoint Planning: Develop detailed sprint planning for October 13th alpha deliverable targeting core conversion functionality

Problems, obstacles, needs, or questions that I need help with from client, advisor, or instructor

- 1) Sponsor Status Clarification: Require guidance on next steps for internal project assignment process and timeline for program-sponsored project consideration
- 2) Technical Scope Validation: Need confirmation that proposed AI integration complexity and 15-user story scope meets graduate-level capstone requirements across software engineering subfields
- 3) Implementation Priority: Request advice on balancing technical sophistication with 3-month deliverable timeline constraints

Overall Status

- Project Status Color: Yellow (proposal complete but sponsor uncertainty)
- Project Status Color from Previous Week: Yellow