# Capstone Weekly Status Report 5

**Date and Time**: October 5, 2025

**Student Name**: Satwik Alla

**Capstone Project**: Awaiting assignment - SBOM-A (Software applications/Apps) preferred

**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**

* Project Preference Submission**:** Completed and submitted internal project preference form on October 4th with three ranked choices (SBOM-A, SBOM-D, iBROWSE)
* Comparative Project Research**:** Conducted detailed research on all three preferred projects to understand requirements, technical complexity, and implementation feasibility
* SBOM Standards Investigation**:** Researched Software Bill of Materials standards, SPDX/CycloneDX formats, and existing SBOM tools (Syft, SBOM Tool, etc.)
* Academic Literature Review**:** Reviewed research papers on SBOM empirical studies, landscape analysis, and stakeholder perspectives
* Browser Security Research**:** Investigated browser extension architectures, Web Extensions API, and privacy/security assessment methodologies for iBROWSE option
* Groundwork Activities**:** Maintained project readiness while awaiting assignment finalization

**Work Planned for Next Week**

* Project Assignment Confirmation: Receive and confirm final project assignment (October 6th)
* Deep Requirements Analysis: Thoroughly analyze assigned project's core functions, special considerations, and resource materials
* Technical Stack Selection: Identify and evaluate appropriate technologies (databases, search engines, APIs, frameworks) for the assigned project
* Architecture Planning: Design system architecture including data models, search implementation (with fuzzy search), and comparison engine
* Development Environment Setup: Configure development environment, initialize Git repository, and establish project structure
* Alpha Deliverable Planning: Create detailed implementation plan for October 13th alpha checkpoint focusing on core search and display functionality
* Data Strategy Development: If SBOM project assigned, establish strategy for obtaining/generating SBOM data; if iBROWSE is assigned, begin browser API integration research
* Initial Development Sprint: Begin coding core features to have functional demonstration ready for alpha checkpoint

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

* Compressed Timeline: With assignment on October 6th and alpha due October 13th, need clarification on minimum viable deliverable expectations for alpha given only one week of development time
* SBOM Data Acquisition: If assigned to SBOM project, I may need guidance on accessing legitimate SBOM data sources or creating representative sample datasets for development
* Alpha Scope Definition: Request specific guidance on which core features are essential for alpha vs. which can be deferred to beta checkpoint
* Cross-Browser Development: If assigned iBROWSE, may need resources on maintaining single codebase across multiple browser platforms

**Overall Status**

* Project Status Color: Yellow (Project assignment pending, tight timeline to alpha)
* Project Status Color from Previous Week: Yellow