**Module 3: Milestone 2**

Zane Milo Deso

Southern New Hampshire University  
CS-499

**Milestone 2**

**Introduction**

Approaching the close of my undergraduate studies, Milestone Two gave me a hands-on opportunity to make tangible progress toward enhancing one of the most important artifacts I’ve built: my full-stack recipe recommendation web app. This project showcases the knowledge I've gained and illustrates the kind of software I want to design. Software with solutions that are practical, clear in architecture, and user centric. This milestone helped me take what was a functioning core and begin elevating it into something presentable and professional.  
**Artifact Description**

The artifact is a recipe recommendation web application built using Express.js, MongoDB, and a static HTML/CSS/JavaScript frontend. The backend uses binary vectorized filtering to compare user-inputted ingredients with stored recipe vectors. It began as a working prototype utilizing static JSON data and has since evolved through refinements in backend modularity and planned MongoDB schema integration. The goal is to deliver intelligent recipe suggestions with a smooth user experience and clear internal logic.

## **Justification for Inclusion in ePortfolio**

This artifact was chosen because it synthesizes skills from across the computer science curriculum. To name a few: software architecture, algorithmic matching, and backend/frontend integration. The dot-product ingredient matching is a concrete example of practical algorithmic thinking. The application structure uses express routing and modular folder separation, which directly reflects lessons learned in software design. Recent enhancements include a README with usage details, cleaned backend code, clear directory structure, and planning for database schema integration. All of this prepares the project for future polish and delivery.

## **Course Outcomes Addressed**

In Module One, I targeted the outcome: “Demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals.” I’ve made direct progress on this by refactoring backend code for modular clarity and prepping the system for database integration with MongoDB. These enhancements improve maintainability, user scalability, and actual industry application value.

## **Reflection on the Enhancement Process**

This enhancement stage taught me to resist the urge to over-polish the UI too early and focus on stability and scalability instead. Working on clear folder separation, route logic, and a professional README improved the clarity of my codebase and forced me to think about how a future developer or hiring manager might interact with my work. One challenge was scope creep, especially when thinking about recipe card features and CSS polish. For now, I’ve documented those as future enhancements, keeping the milestone work realistic and valuable.

## **Conclusion**

Milestone Two helped me ground my work in professionalism. Writing functioning code, shaping it to represent thoughtful engineering and telling a story to an outside observer is paramount. This artifact now stands as a confident showcase of my ability to design real-world solutions, and it’s one I plan to continue refining as I push toward my final ePortfolio.