### **Travlr Getaways – Software Design & Engineering Narrative**

#### **1. Artifact Overview**

**Title:** Travlr Getaways Web Application  
 **Original Course:** CS-465 Full Stack Development  
 **Created:** Spring 2025

Travlr Getaways is a full-stack travel booking web application developed using the MEAN stack (MongoDB, Express, Angular, Node.js). It allows users to browse and manage travel trips. The original version consisted of basic static pages with minimal component separation and no reusable design patterns.

#### **2. Justification for Inclusion**

I selected this artifact to represent my skills in software design and engineering because it demonstrates my ability to build a well-structured, modular full-stack application using industry best practices.

Enhancements I made:

* Refactored the Angular frontend to use separate components (trip-card, trip-listing, add-trip, edit-trip) for clarity and reuse.
* Implemented MVC structure in the backend using Express routes, controllers, and Mongoose models.
* Improved routing and data flow using a centralized trip-data.service.ts.
* Used Bootstrap to enhance layout and responsive design.

These enhancements reflect strong skills in modularity, maintainability, and separation of concerns. They also align with course outcomes related to applying software engineering principles and delivering professional-quality solutions.

#### **3. Enhancement Reflection**

Enhancing this artifact helped me deepen my understanding of scalable frontend architecture, component-based design, and API integration.

I faced challenges organizing Angular components and managing data between them. I solved this by restructuring inputs/outputs and using services. On the backend, I improved Express route handling and added error management.

This artifact is now more readable, maintainable, and scalable, reflecting my growth in software engineering and readiness for professional development work.