Part A - Individual Contribution

In this project, I was responsible for creating and maintaining the backend, from designing database schemas in MongoDB using mongoose npm package to deploying the application using AWS Lambda. I implemented authentication using JWT tokens, integrated RESTful routes via Node.js, TypeScript, and Express, and leveraged TSOA to auto-generate the express routes from the controllers. I also utilized dependency injection with type-di and DTO's object mapping with automapper. I set up continuous integration/continuous deployment (CI/CD) on AWS Lambda to ensure that changes from our main branch were deployed automatically. For testing, I created some tests using Jest for both unit tests for services and other API's and full integration tests for some controllers. Throughout this project, I built upon skills I identified last Fall, such as software engineering best practices, agile development, and large-codebase management.

Along with my contributions to the backend, I also added to the frontend by researching and implementing the OpenAPI generator, from OpenAPI, that transformed my backend's Swagger documentation into a working API for the frontend to use, integrating this step into my build process for the backend, so the frontend is always updated from any of my changes. Along with this I implemented the actual usage of the API's in the frontend and made other features in the frontend. I've made progress on both sides of the application, which shows in my commit statistics: 52,000 lines added and 21,000 lines deleted across 195 commits. Overall, I delivered the backend of our application, connected the frontend to retrieve data from the backend, implemented the frontend's authentication process, and helped in creating some features of the frontend, such as when loading job/shift data, the frontend progressively loads and adds to the display, so it's more reactive for a better quality of experience.