**CS4910 - Interactive Maps**

Client: Dustin

A bike routing application for the city of Kalamazoo that specifies routes based on the stress level of the route, this stress level is based on the topology of the roads. The topologies include priority streets, main streets, neighborhood connector streets, neighborhood streets, and bike paths (in order of stress). The busier the road and higher the speed limit, the higher the stress level. Google maps / similar free maps routes will be the default route, meaning the shortest route will be prioritized. From the default (being the highest stress due to google defaulting to main streets), the user then has the ability to toggle/untoggle certain road topologies to change the route. The route will then prioritize the toggled typologies over the shortest path. The application should be able to access the user’s current location for the starting point of the route and will allow users to either click a location or enter an address to their destination. Radio buttons will be used for the different street topologies, in which users select their preferred stress level. There will be an amenity overlay on the map, these amenities do not affect the route itself. The amenities include bathrooms, bike racks, repair stations and air pumps, drinking fountains, bike shops, grocery stores, pharmacies, cafes, bars, and restaurants, treat and ice cream shops, and bookstores and libraries. These amenities have photos and text descriptions, with the possibility to allow users to upload these images themselves to alleviate the burden on ModeShift. These uploads will need to be assessed before being published to the amenity, and in order to securely allow user uploads.