

# FSE Team 4 SV

This repo contains the source code for the Emergency Social Network developed during the Foundations of Software Engineering class at Carnegie Mellon University in the Spring 2017.

## Techonology Selection:

### Frontend Tiers:

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- *HTML5, Javascript*

- *Angular.js:*



- AngularJS is a JavaScript framework. AngularJS extends HTML attributes with Directives, and binds data to HTML with Expressions. For more info, click [Angular.js](#)
- In our team, we have two people that are familiar with Angular.js. So, we believe that Angular.js is a good choice for our team work.

- *Bootstrap:*



- Bootstrap is a free and open-source front-end web framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself with front-end development only. For more info, click [Bootstrap](#)
- With Bootstrap, we can easiler design a beautiful and terse UI without wasting too much time and energy. There are already lots of themes available online.

# Backend Tiers:

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## - *Node.js*

## - *Express.js*

express

- Express.js, or simply Express, is a web application framework for Node.js, released as free and open-source software under the MIT License. It is designed for building web applications and APIs. It is the de facto standard server framework for Node.js. For more info, click [Express.js](#)
- Express.js can make our web application development fast and easy. And, from the FSE chat-room, we realize that Express.js provide lots of modules that can be used by us to achieve our goal.

## - *Socket.io*

- Socket.IO is a JavaScript library for realtime web applications. It enables realtime, bi-directional communication between web clients and servers. For more info, click [Socket.io](#)
- Socket.IO simplifies our work to build communication with clients and servers. So, we can save lots of time to finish more functions and beautify our Front-tier.

## - *MongoDB for database*



- MongoDB (from humongous) is a free and open-source cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with schemas. For more info, click [MongoDB](#)
- At first, we want to choose MySQL, however, we think it is a good opportunity to learn MongoDB. Besides, it can support JavaScript better. So, Why not?

## - *Mongoose ORM*

- Mongoose provides a straight-forward, schema-based solution to model application data. It includes built-in type casting, validation, query building, business logic hooks and more, out of the box. For more info, click [Mongoose ORM](#)
- One reason why we choose Mongoose is that we can have built-in automatic validation of the data which

we are inserting/updating. Mongoose also can give us the ability to pre-define events to happen.

## Building and Testing Infrastructure:

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### **- *Gulp for build automation***

- Gulp.js is an open-source JavaScript toolkit by Fractal Innovations and the open source community at git, used as a streaming build system in front-end web development. For more info, click [Gupl](#)
- By using Gulp, our task runners would be more consistent, effective, efficient and repeatable. Besides, Grunt also allows us to customize our tasks by using predefined plugins.

### **- *Mocha, Selenium for testing***

- Mocha is a feature-rich JavaScript test framework running on Node.js and in the browser, making asynchronous testing simple and fun. Mocha tests run serially, allowing for flexible and accurate reporting, while mapping uncaught exceptions to the correct test cases. Hosted on GitHub. For more info, click [Mocha](#)

### **- *Karma***

- The main goal for Karma is to bring a productive testing environment to developers. The environment being one where they don't have to set up loads of configurations, but rather a place where developers can just write the code and get instant feedback from their tests. Because getting quick feedback is what makes you productive and creative. For more info, click [Karma](#)

### **- *API Blueprint for documenting REST Endpoints***

- API Blueprint is simple and accessible to everybody involved in the API lifecycle. Its syntax is concise yet expressive. With API Blueprint you can quickly design and prototype APIs to be created or document and test already deployed mission-critical APIs. For more info, click [API Blueprint](#)

### **- *Postman for Development Phase test of APIs***

- Postman was designed from the ground up, to support all aspects of API development. Postman's apps are built on a single underlying layer, ensuring consistent performance and user experience. For more info, click [Postman](#)