Project: Lightning

Team: Winners

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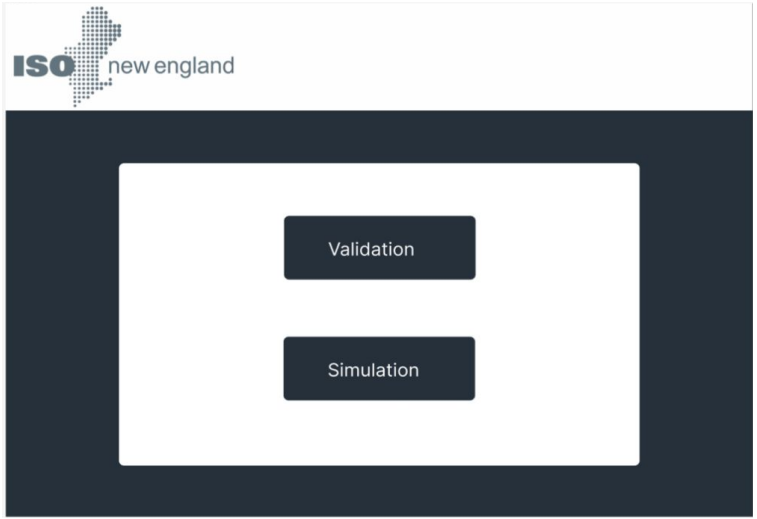
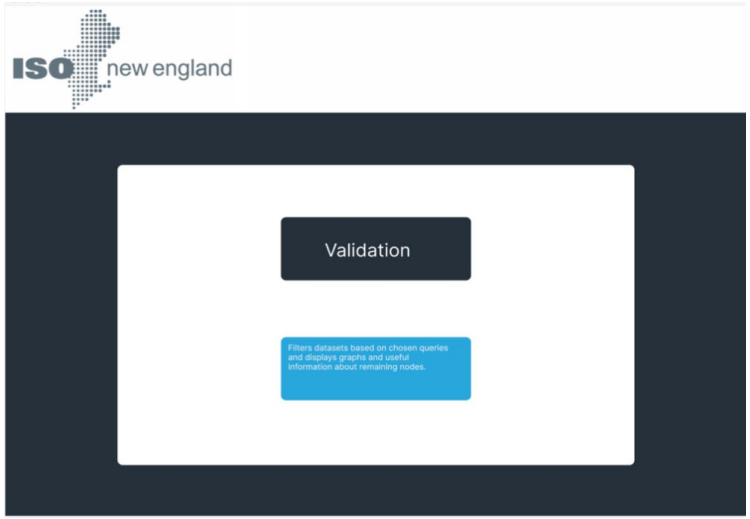
Front-end Progress

- **Updated the filtering page** User Interface
  - Incorporated client's feedback from last week
  - Enhanced scalability and ability to customize
- **Added functionality** to Figma
  - Allowed us to have a better understanding of how the user will interact with the interface
  - Provided insights on how to code the interface
- Gained more **knowledge about React**
  - Familiarize ourselves with components
  - Explored stateless and stateful components

UI Updates



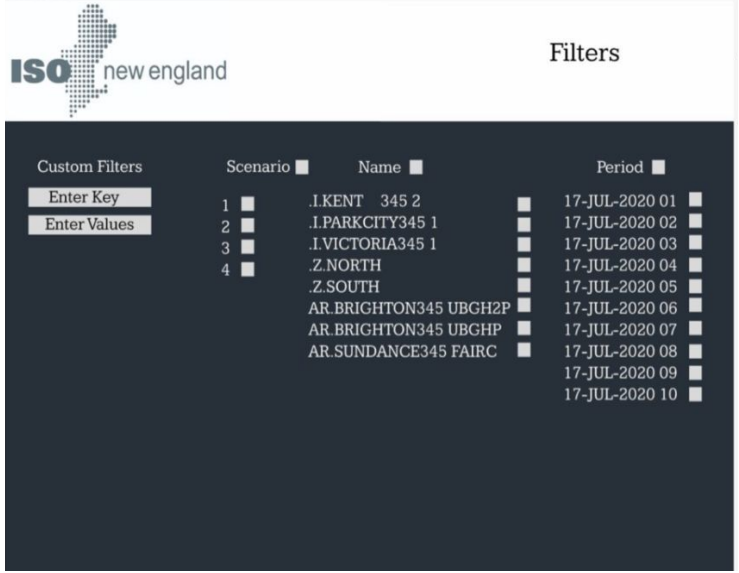
Initial Interface



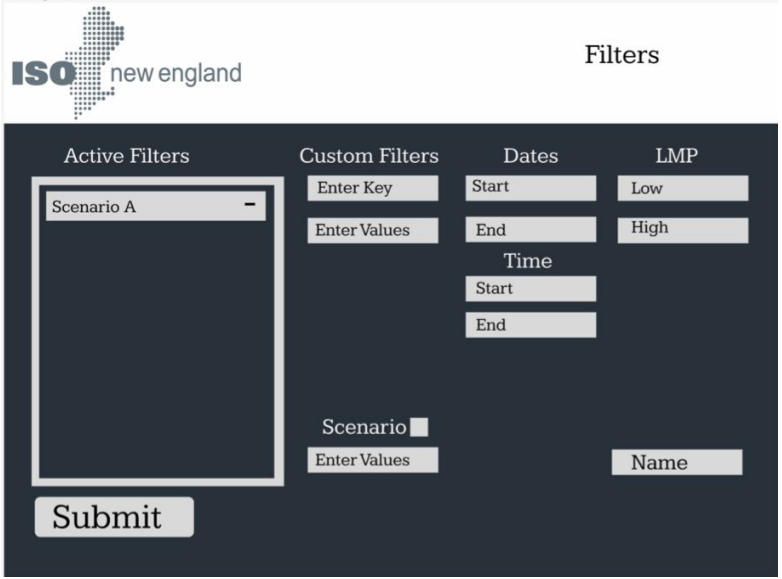
Updated Interface

Figure 1: Use case and the description

UI Updates



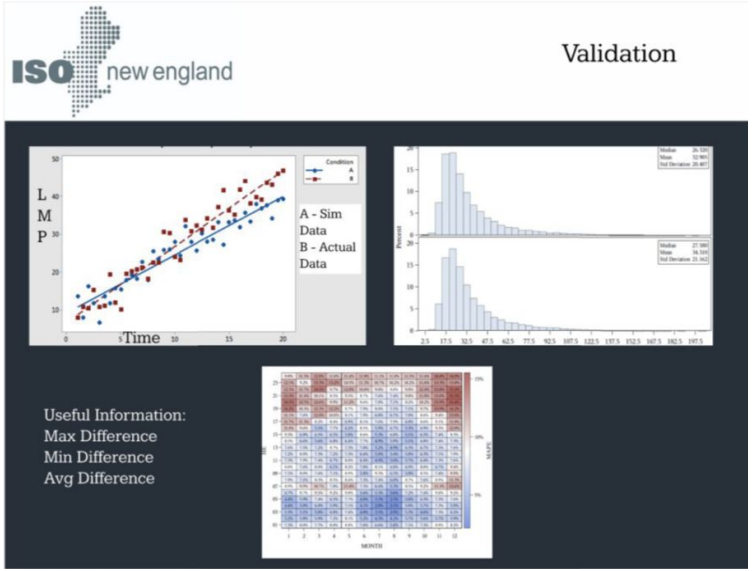
Initial Interface



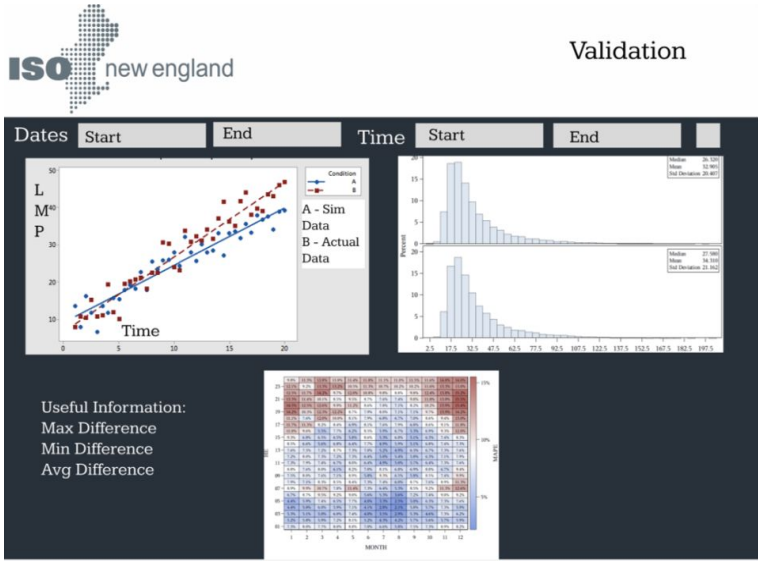
Updated Interface

Figure 2 : Added the ability to search to improve scalability and customize the filters

UI Updates



Initial Interface



Updated Interface

Figure 3 : Added the ability to allow the users to customize the graph by time

Backend, Database Progress

- Explored MongoDB Atlas in depth using sample code
- Successfully imported the data into MongoDB!
- Currently working on a script to implement a GET pull query to/from the database to finalize REST architecture

Figure 4 : Sample entry in the database

System Architecture

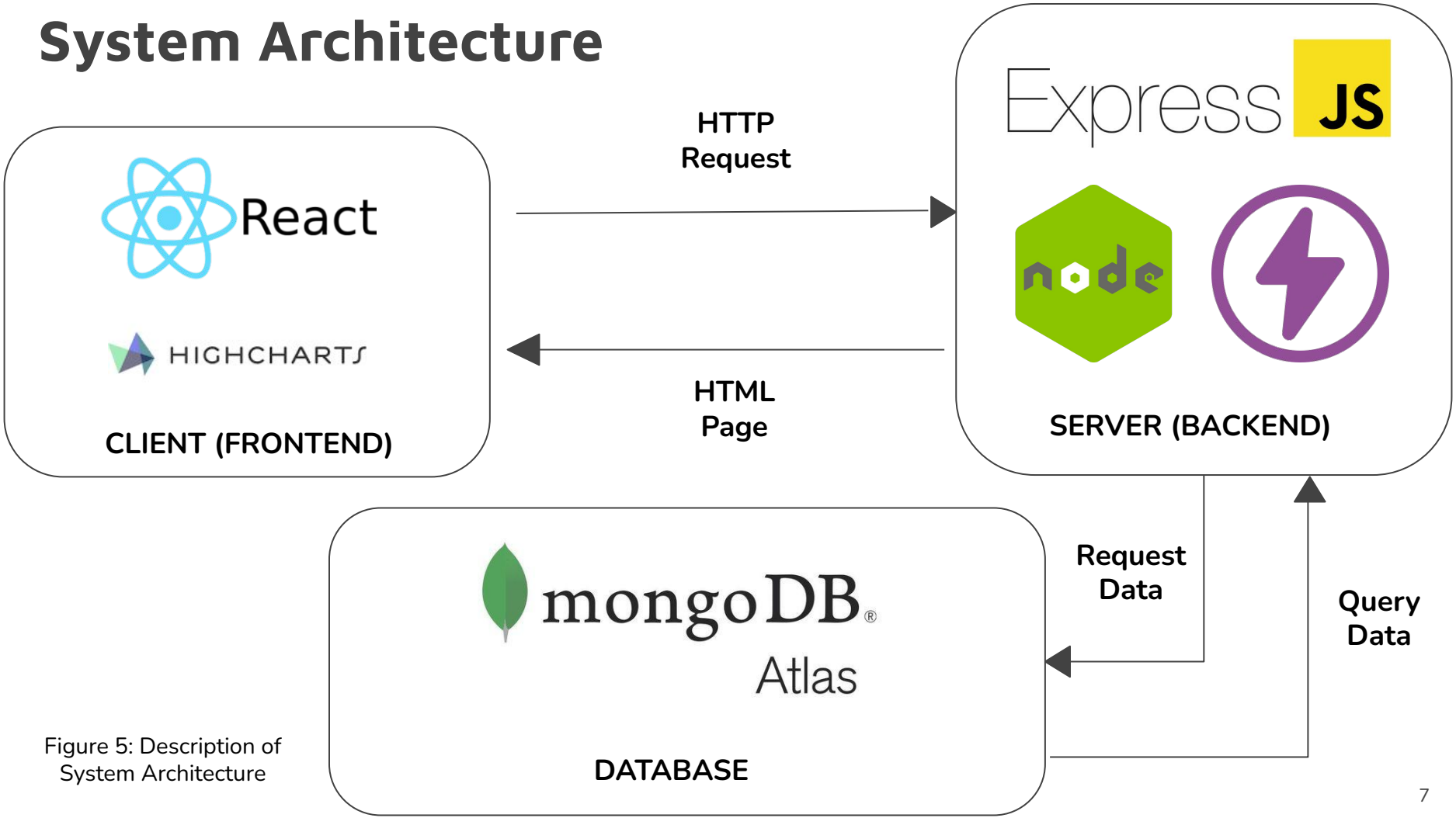


Figure 5: Description of System Architecture

REST API

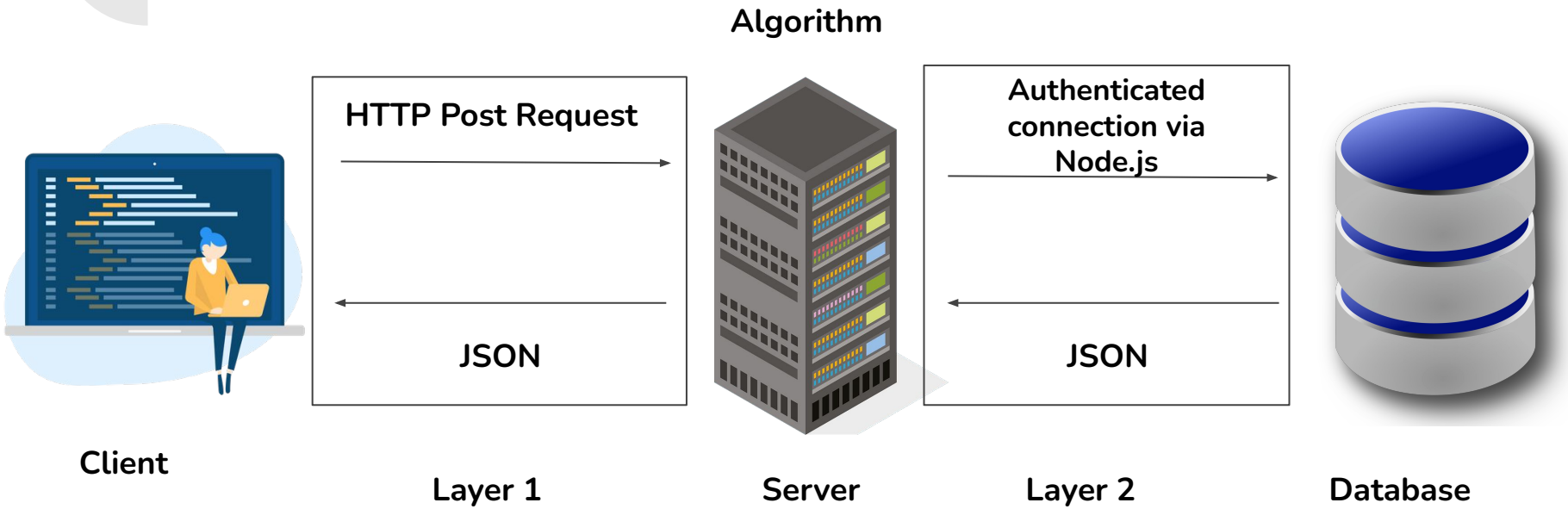


Figure 6 : A high level overview of the two-layered RESTful API

Frontend Challenges

- Steep learning curve of React components essential to our proposed implementation
- Division of page-specific tasks among team members
- Identification of the complexity of each feature
- Deciding the API endpoints that we need from the back end

Backend Challenges

- VSCode was not securely connecting to the database
  - Resolved by adding IP addresses inside the database
- Comments in the client's CSV are automatically converted into database fields
  - Do we need to account for comments in our implementation?

```
error: MongoNetworkError: connection <monitor> to 34.233.191.195:27017 closed
    at Connection.onClose (/Users/aaditbhatia/node_modules/mongodb/lib/cmap/connection.js:135:19)
    at TLSSocket.<anonymous> (/Users/aaditbhatia/node_modules/mongodb/lib/cmap/connection.js:62:46)
    at TLSSocket.emit (node:events:513:28)
    at node:net:313:12
    at TCP.done (node:_tls_wrap:587:7) {
  [Symbol(errorLabels)]: Set(1) { 'ResetPool' }
},
```

Figure 7: Connection - Authentication error

Goals for next week

Frontend

- Implement a basic framework of the User Interface
- Implement a mock up of the visualization graphs using some fake data

Backend

- Implement a test query on the database to ensure smooth and streamlined access
- Initiate the construction of the REST API

General

- Establish a contract between frontend and backend teams that defines terms of access to the data, data flow and transfer between the application components.

Questions?