JUSTICE

Judgment Utility Space Time Intensive Crime Evaluator

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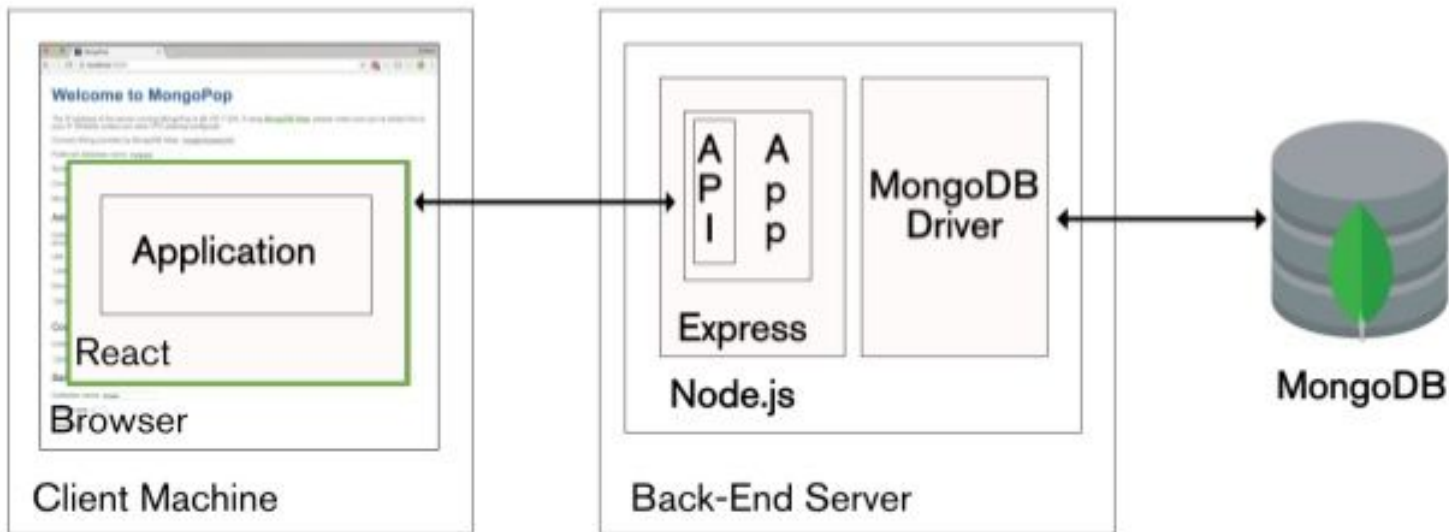Nicholas Sorauf

Uses of JUSTICE Application

- Police officers can filter the data by time to match their shift to get a good idea of what sort of crimes have historically happened during their shift

- People who live or work in Baltimore could use the application to see the frequency of crime that occurs in the area that they live or work in

MERN

- MongoDB : Document database – used by your back-end application to store its data as JSON (JavaScript Object Notation) documents
- Express (sometimes referred to as Express.js): Back-end web application framework running on top of Node.js
- React: Front-end web app framework; runs your JavaScript code in the user's browser, allowing your application UI to be dynamic
- Node.js : JavaScript runtime environment – lets you implement your application back-end in JavaScript

The ME**R**N Stack

API App
Express
Node.js

MongoDB Driver

Welcome to MongoPop

Application
React
Browser

Client Machine

Back-End Server

MongoDB

Front End - React

Why React?

- Efficiently update website
    - No need for 'submit' or reloading page
- Organization of app into components
    - Break website down into manageable pieces
- Packages to easily add features
    - Use premade components to save development time

Back End - Node.js and Express

The reason Node.js and Express as our backend

- Works well with React and MongoDB
- Lightweight and flexible backend for web applications
- Supports http request methods
- Provides a method for accessing the database

Database - MongoDB

- Easily import JSON object into the database
- Was able to clean up data fields
- Added threat level field to the database
- Fast update time

What we Learned

- Software development process
    - Waterfall Method - limitations
- New technologies
    - Steep learning curve
    - Limited ability to develop quickly
- Deeper understanding of the amount of work that goes into software development
- The importance of staying organized and staying on top of documentation due dates
    - Scheduling conflicts made it a challenge to meet in person