LMU | LA
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CaseX

A CASE EXPLORER WEB APP

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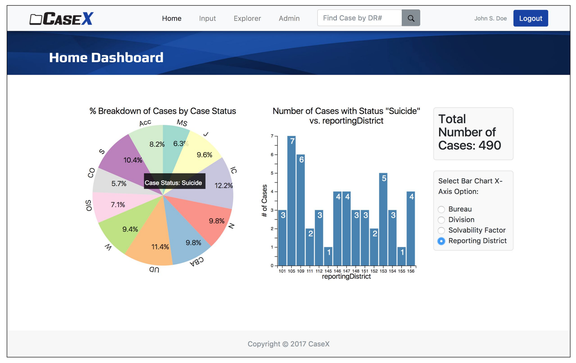
MOTIVATION

Storing data on paper limits the productivity of the LAPD Homicide Library Unit. Access is slow, single-user and prone to data loss. We built a web app that allows rapid queries, enables concurrent access and eliminates the risk of damaging data.

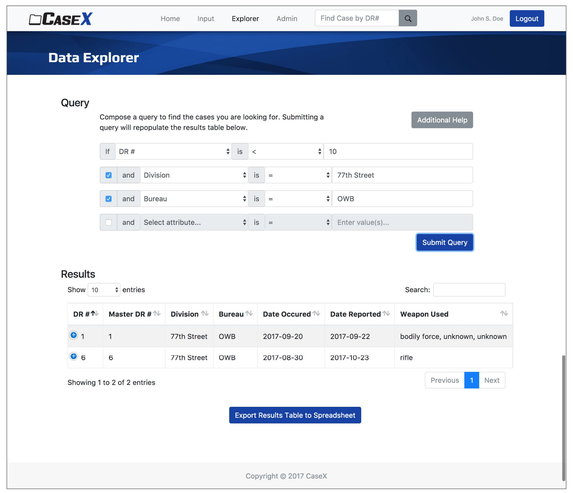
JUSTIFICATION

CaseX gives us an opportunity to work on a real-world problem and gain experience with modern web development technology.

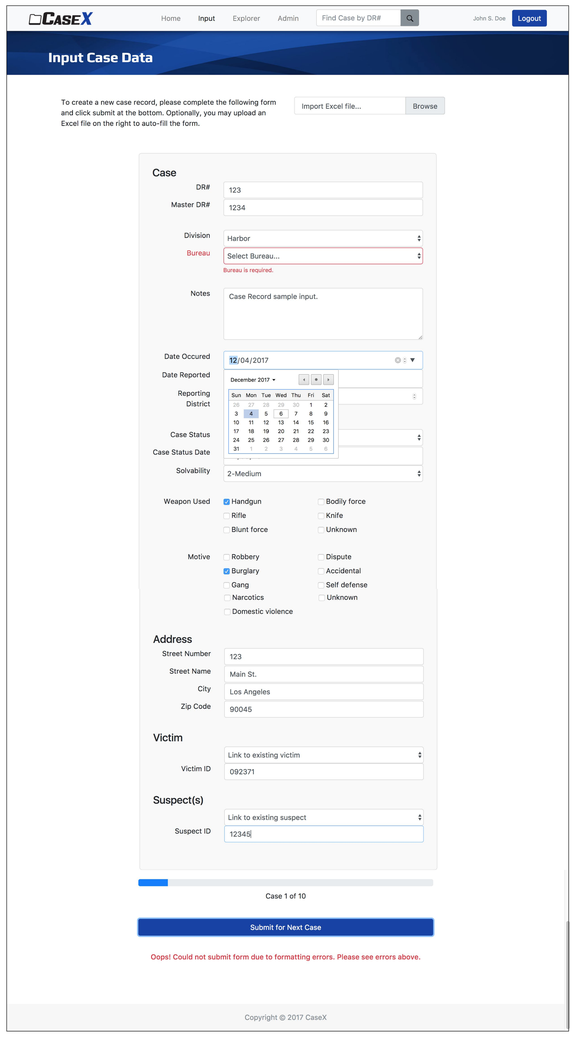
CASEX IS AN INTERACTIVE WEB APPLICATION AND SCALABLE DATABASE SOLUTION OPTIMIZED FOR THE MANAGEMENT OF PHYSICAL CASE DATA.



The Home Dashboard page.



The Data Explorer page.



The Input Case Data page.

KEY FEATURES

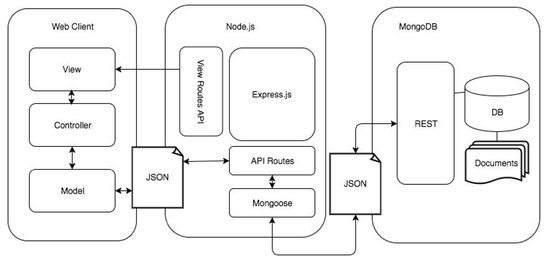
- Digitize meta-data of case records through manual or automatic Excel import.
- Data validation to ensure data quality and consistency.
- Make queries on data and visualize trends.
- Generate Excel reports from queried data.
- JWT-based authentication secures access to data.

ARCHITECTURE

Software organized into frontend, server, and database layers.

User interface split into Home, Input, Explorer, and Admin page.

Three privilege levels: Administrator, Form-Filler, and Read-Only.



CaseX Architecture Diagram

TECHNOLOGIES

- mongoDB. — Document database for storing case data.
- node.js — Server-side JavaScript runtime.
- express — Web application framework for Node.js.
- D3 — JavaScript library for building visualizations.
- Bootstrap — Front-end web framework.