

Judge Frog: Comprehensive Human Trafficking Data Search and Analysis

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Problem

- The issue of human trafficking has sparked interest from the government, academicians, non-government organizations, and the private sector
- With today's available resources on human trafficking it is difficult to examine:
 - How interconnected is organized crime with human trafficking in the United States
 - What types of organized crime groups engage in human trafficking
 - The possibility to prevent individuals from engaging in organized crime, and specifically human trafficking

Solution

Our project addresses the issues stated in the problem by:

- Creating a comprehensive database to store information on federal human trafficking cases
- Developing tools for administrators to maintain the database
- Developing interface for administrators to maintain users
- Providing a robust search function allowing users to query and filter the database
- Displaying dynamically generated graphs that allow analyses to be performed on these cases

Database Structure

- Comprehensive database developed with MySQL
- Stores case information consisting of judge, federal district location, defendant, and victims information
- Each defendant contains information regarding their arrest, charges, sentencing and organized crime involvement
- Database contains multiple tables allowing assistants to insert cases and receive administrator approval before appending new information to the working dataset

Web Application

- Provides a user friendly web interface for the user to search thousands of human trafficking cases
- Interfaces with MySQL database to search, analyze, and maintain a working dataset
- Will allow public access at no cost

STEP 1

The web application provides users with the ability to search based on 47 case variables, e.g., "Female" defendants that are charged under statute "1324"

The search interface includes a 'SEARCH BY' section with a magnifying glass icon. Below it are several filter categories: Case, Type of Trafficking, Defendant, Judge, Organized Crime Group, Victims, Arrest Details, Charge Details, and Sentencing Details. The 'Defendant' filter is expanded, showing fields for Name, Gender (set to Female), Year of Birth (range 1950-2014), and Race. The 'Charge Details' filter is also expanded, showing Date of Charge (range 2000-2020) and Total Charges (range 0-20), with a dropdown menu set to '1324'.

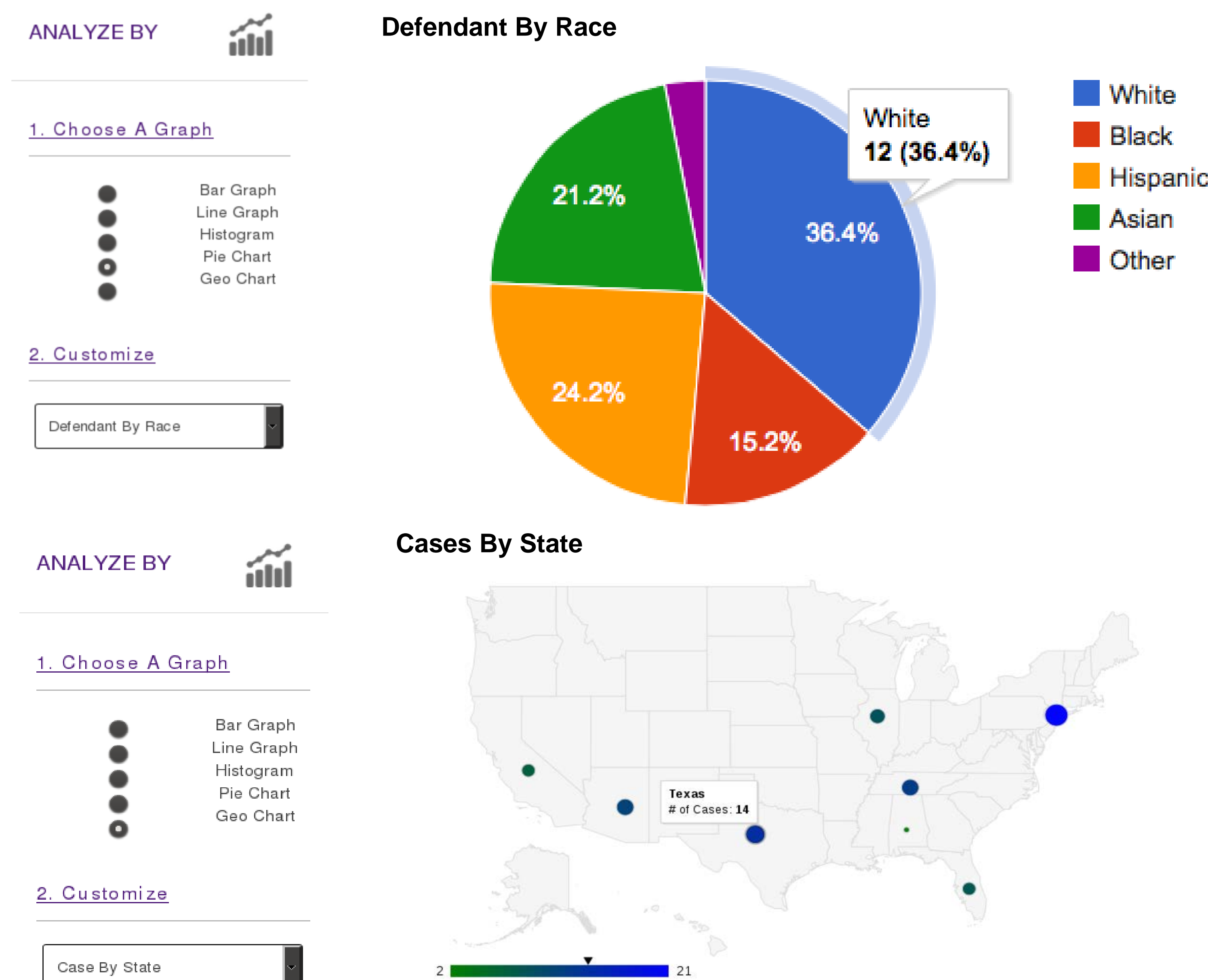
STEP 2

The search shows 16 cases that involve "Female" defendants charged under statute "1324"

Case Name	Case Number	Year	Type of Case	# of Defendants
USA v. Afolabi et al	2:07-cr-00785-JLL	2007	LM	4
USA v. Alamin	2:00-cr-01001-R	2000	L	2
USA v. Airovaishan et al	1:3-cr-00311	2003	L	2
USA v. Balderas-Orosco et al	1:06-cr-00200-SS	2003	A	13
USA v. Baravik et al	2:09-cr-00003-MSD-TEM	2009	L	27
USA v. Ding et al	4:09-CR-00573-SBA	2009	L	3
USA v. Djoumessi et al	2:05-cr-80110-AJT-MKM-1	2005	LM	2
USA v. Kim et al	1:06-cr-00605-CBA-RLM	2006	A	11
USA v. Leon-Aldana et al	3:07-cr-00035-L	2007	L	4
USA v. Mesfun et al	2:05-cr-00858-WHW	2005	L	2
USA v. Mondragon et al	4:05-cr-00468	2005	L	8
USA v. Udogwu	1:99-cr-00795-DC-1	1999	L	2
USA v. Veerapol	2:98-cr-00334-CM-1	1998	L	1
USA v. Wei et al	1:10-cr-10098-GAO	2010	A	5
USA v. Zavala et al	2:04-CR-00962-SJF-1	2004	L	2
USA v. Farquharson	3:06-cr-00126-MOC-DSC-1	2006	L	1

STEP 4

After reviewing the case details the user can perform further analysis using the graphing interface



STEP 3

The user can choose any of the 16 selected cases and review all details or filtered details based on the search criteria given. The modal window displays details of the case chosen.

Case Name	Case Number	# Defendants	State	Federal District	Year
USA v. Alamin	2:00-cr-01001-R	2	CA	9-Central	2000

Name	Gender	Year of Birth	Race
Nur Alamin	Male	1960	Other

Statute	Counts	Counts Nolle Prossed	Plea Guilty	Plea Dismissed	Trial Guilty	Trial Not Guilty	Fines	Months Sentenced	Months Probation
1324	2	0	0	0	2	0	\$0	135	0

Name	Gender	Year of Birth	Race
Rabiya Akhter	Female	1968	Other

Search Panel

- Allows user to search the database for thousands of cases and their individual defendants
- Search by 47 different case specific variables and view applicable results in table
- Select row in results table to display detailed case information

Analyze Panel

- Allows user to visualize specified data from all or selected cases
- Choose from 5 types of graphs and select the independent and dependent variables to dynamically generate an interactive graph

Admin Panel

- User permissions:
 - Admin: allowed full access to admin panel
 - Research Assistant (RA): allowed access to create and edit
- Case entry is performed via single-case insertion or administrator batch upload
- Allows administrators to review a case after case has been inserted or edited
- Case editing and deletion performed solely by admins

Results and Conclusions

- Successfully developed a highly efficient interface for searching and analyzing human trafficking cases
- Provided ability for admins to maintain dataset to add to project longevity
- Experienced real world interactions with clients and working with clients' requirements

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