Design Decisions

Our goal: To show how different factors impact the Chicago crime rate.
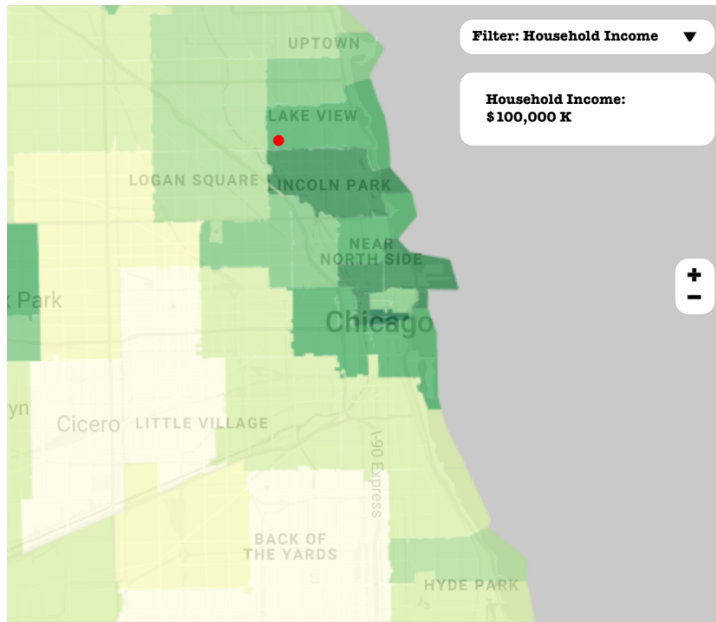
For our design, our main goal was to tell a story about the Chicago crime with a modern, simplistic visualization. In fact, the colors were tailored to green and black intentionally. Black is associated with power and authority and green is associated with stimulating harmony, health, and tranquility. These two colors also contrast well with each other to provide emphasis on the important elements. Since our audience is people who will want to focus on reducing these crime rates, these colors mesh perfectly with our objectives.

We first want to provide background context to all viewers. To do this we have various filters to show the demographic of different Chicago communities. Additionally, we plan to create a tree map to summarize the 330 descriptions of crime and 28 types of crime. The purpose of a tree map is to group similar items together in an aesthetic manner. This works as an introduction to crimes to Chicago and the interactive filter for the maps area.

Next, we plan to have an interactive visualization for users to filter various crimes on time periods. The tree map will help us group these categories to maintain simplicity for filtering. Additionally, we plan to make an interactive scrollable and automated timeline where users can understand how the crime rate has altered over the course of various years. The automated section of the timeline will allow us to scroll over the 4-year period and will display all the crime in a certain day/year accordingly and populate the date/time at the top right. The scrollable will allow the user to interact with the visualization (for ex. if the user wants to see what crime occurred on Dec 24, 2011).

Finally, we want show users how distance from police stations and streetlights can be seen as factors that correlate with crime. We will have the statistical tests to back up our data visualization story.
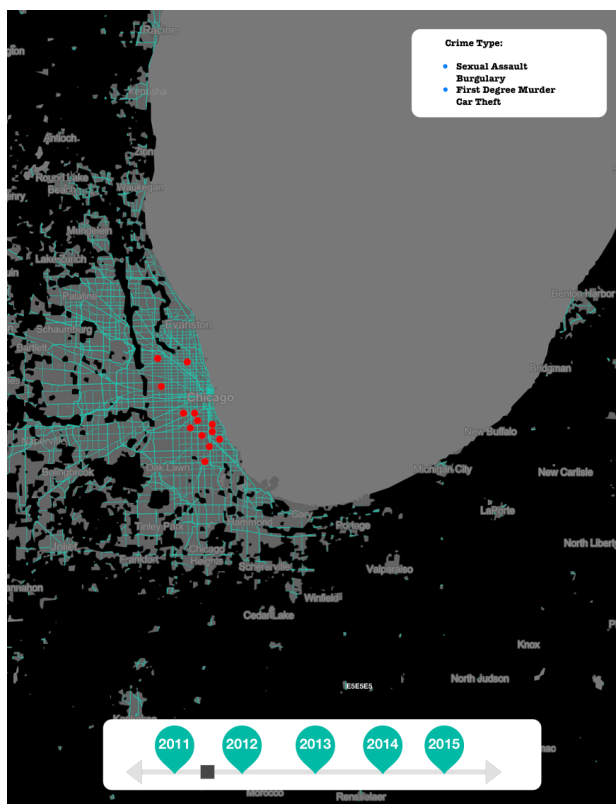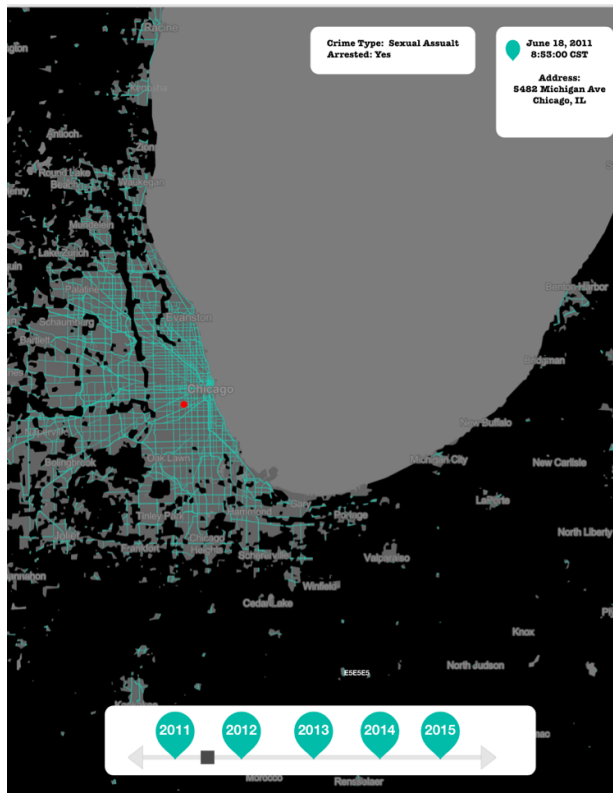

Prototype/Wireframes

We plan to have a page on the Chicago Background statistics to visualize a clear understanding of relevant data such as household income, poverty, rent, etc. We will have various displays such as the example provided above. This will help give a basic understanding of the different communities within Chicago and the relevant data for our project.
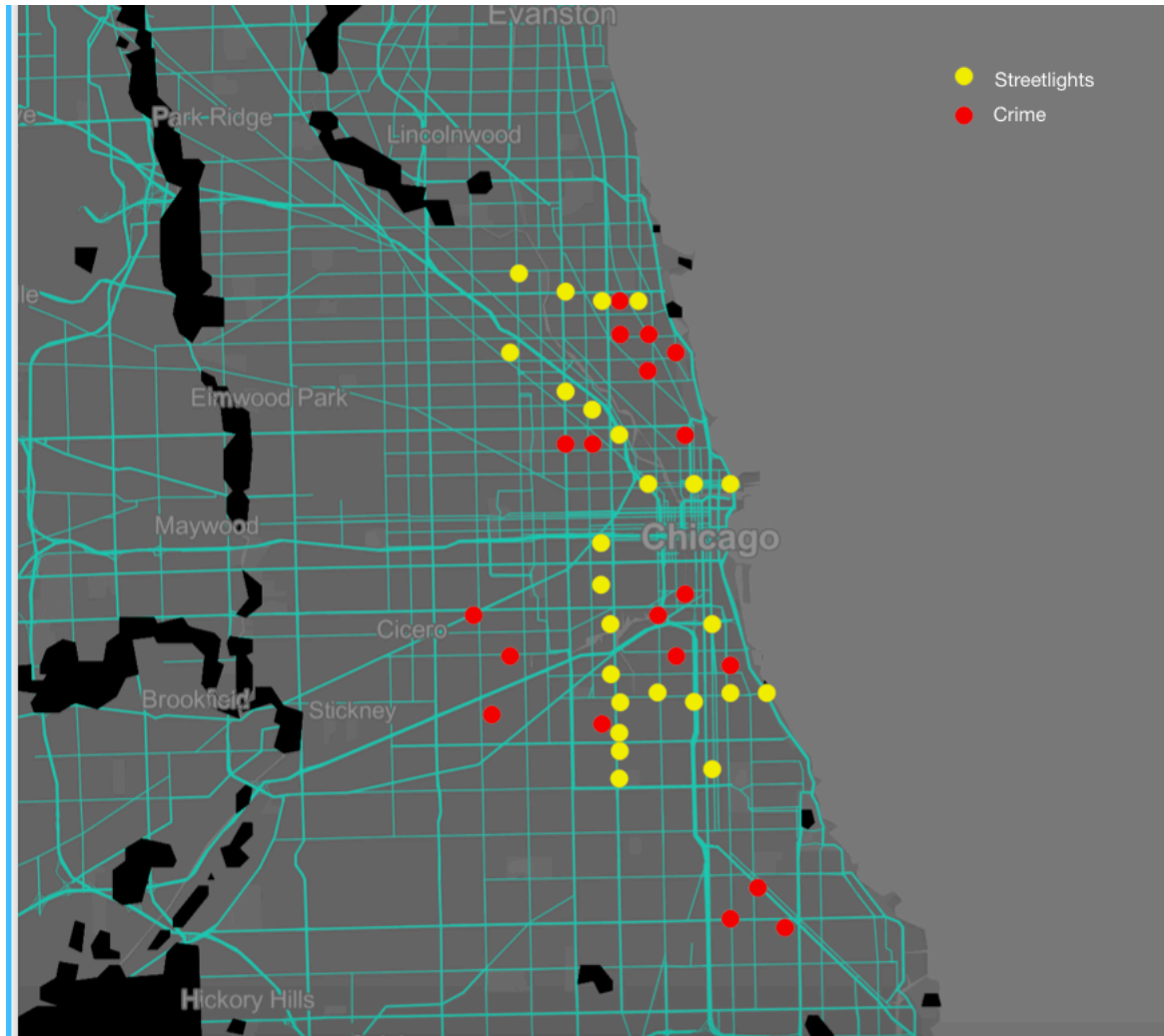
Tree map

Physical Assult		Assult 6%		Narcotics & liquor	
Homicide 12%		Crm Sex 2%		Narcotics 22%	liquor 64%
Theft		Violation		Prostitution 17%	
theft 20%			Kidnap 5%	26%	Pornography
Burglary	Robbery		Narcotics Intimidatin	12%	
45%					

Breaking down "primary type" of crime
to ease interactions for uses.

Crime Type: Sexual Assualt
Arrested: Yes

June 18, 2011
8:53:00 CST

Address:
5482 Michigan Ave
Chicago, IL

2011 2012 2013 2014 2015

Crime Type:
Sexual Assault
Burgulary
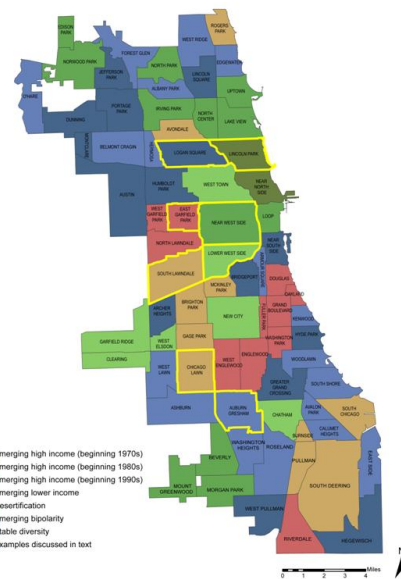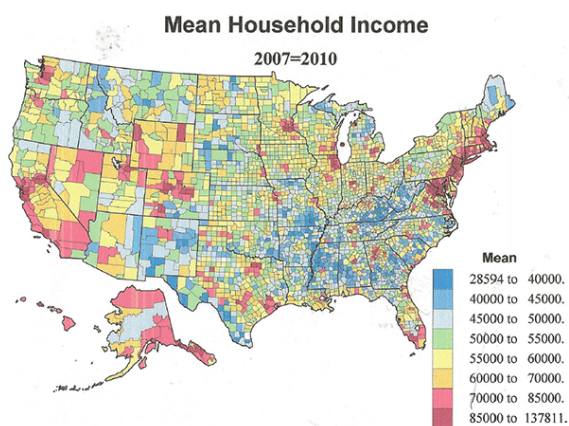First Degree Murder
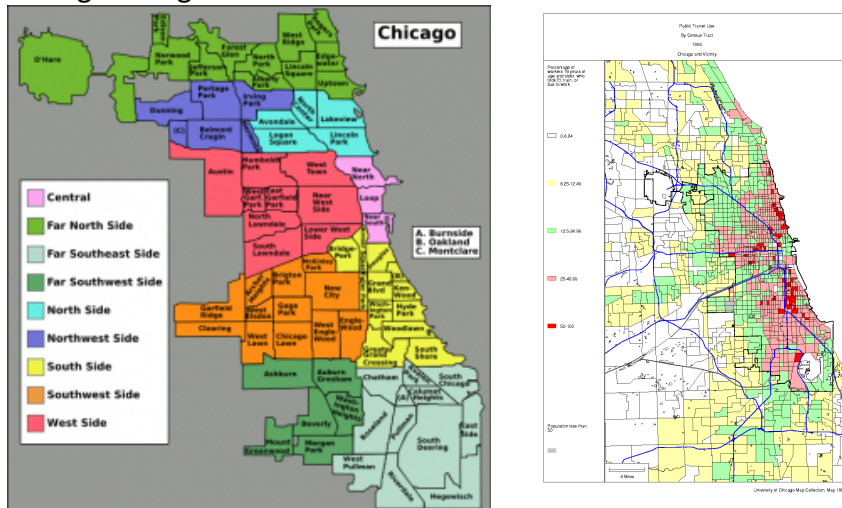Car Theft

2011 2012 2013 2014 2015

We want our second section to contain information about the Chicago Crime and any relevant details. First, we want to create a timeline with all of the data that we have and on this timeline we are hoping to have a scrolling/video like feature where you can either play through the timeline automatically or scroll to specific points on the timeline to see the crimes that have occurred during this period. Additionally, we want to have a display where users can filter out crime by the type of crime during a certain time period.

We want our last section to discuss the impacts of external factors, such as police stations and streetlights, on Chicago crime. In terms of the visualization, we are hoping to display a visualization along these lines so viewers can understand the distances between crimes and streetlights/police stations.
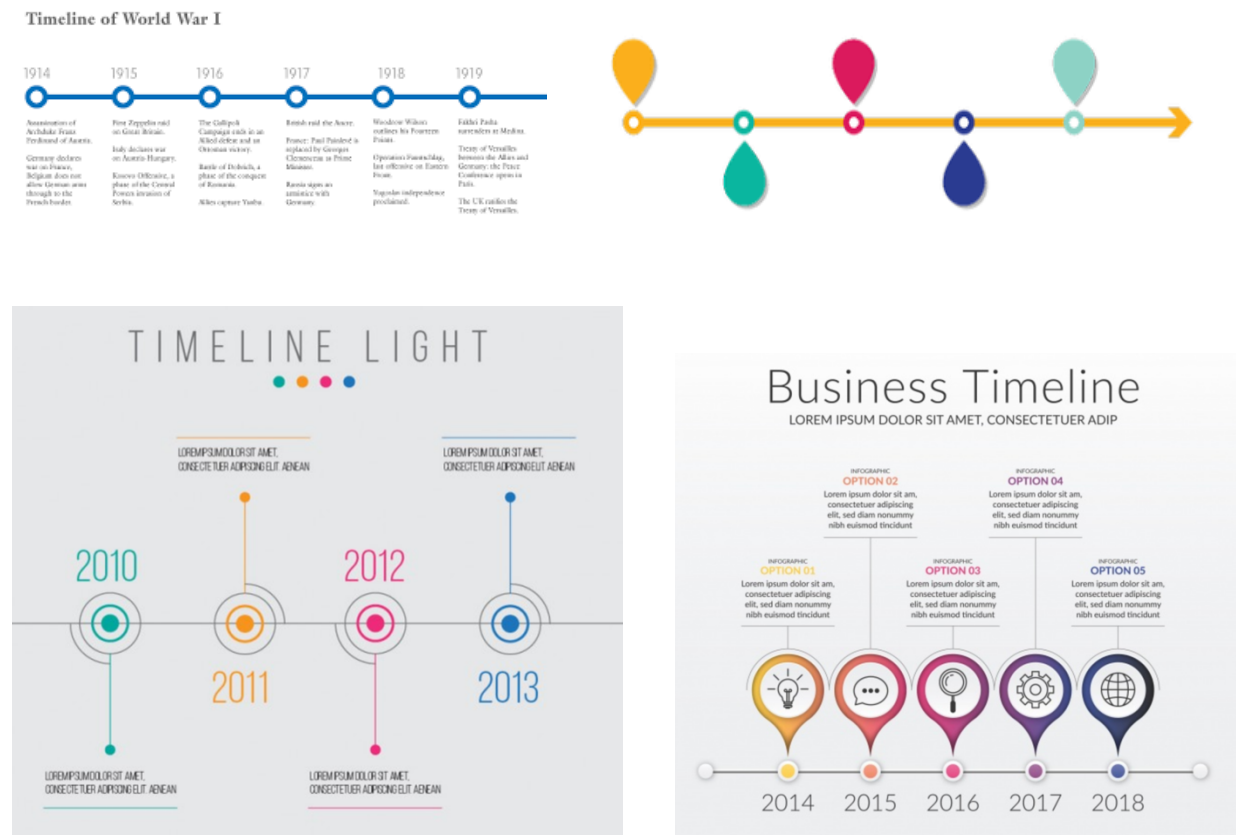
Additionally, we have conducted statistical analysis to identify a correlation between these two to corroborate our visualization.

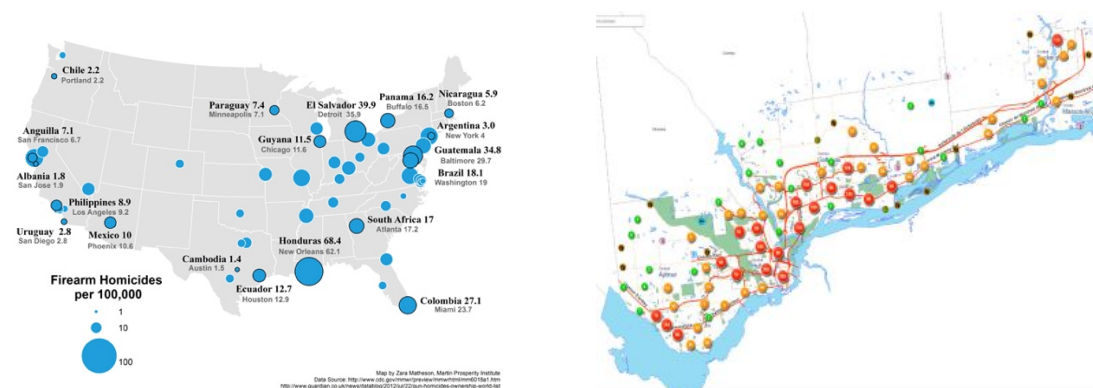# Chicago Background Statistics Screenshots

When we were looking for ideas to visualize demographic information, there was a huge emphasis on colors and/or heat maps. There was also generally a legend to help the viewer understand the map in more detail. Therefore, we tailored our visualization on these.
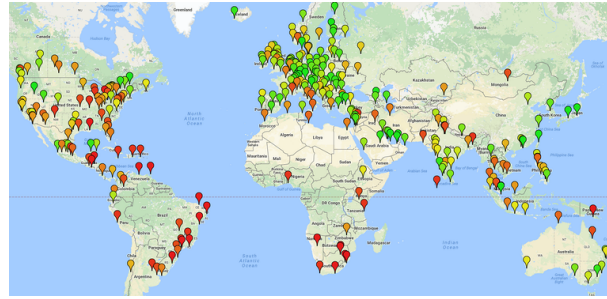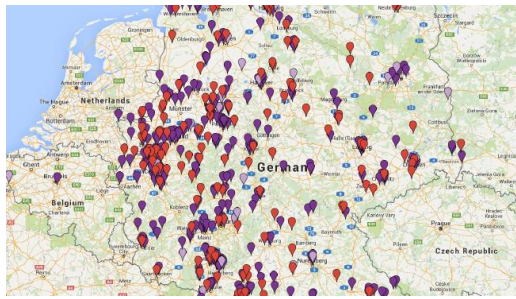
Timeline Screenshots

We wanted to create a timeline for visualizing all the crimes that have occurred over our time range in our dataset. Because our designs are tailored towards a modern visualization, we wanted inspiration from modern timelines.

Crime Rate Map Screenshots

We analyzed various location visualizations and this was a general design idea that we have already been exposed to. In order to make our visualizations unique we are hoping to also add visuals based on the type of crime committed on the map.