



The Migrants' Death Project was created by using the Data from <http://www.themigrantsfile.com>. The Data contains all the recorded events that occurred when a migrant died when trying to reach or stay in Europe from the year 2000 -2016. The Data was visualized to understand better how, where, and which year the events occurred and its impact on the world as a whole. This Project is part of the academic requirement of a Visualization Class (DSSA) at Stockton University.

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DASH LINK: <https://m-death.herokuapp.com/>

DATA : https://docs.google.com/spreadsheets/d/1YNqIzyQfEn4i_be2GGWESnG2Q80EfLASffsXdCOftI/edit#gid=1085726718



***The Migrants Journey leading to their Deaths
(Migrants(packed) on Inflated Boats on the Mediterranean enroute to Europe)***

INTRODUCTION

The US and Europe are considered safe havens for citizens of many underdeveloped and war-zone countries. Consequently, numerous individuals from these regions seek refuge in the US and Europe for a better life. While death is always a tragic event, some fatalities are particularly heart-wrenching. Severe drought, poverty, fear of prosecution, and economic hardship have compelled people to place less value on their lives. They are willing to do anything humanly possible to escape these circumstances, without thinking twice about the consequences associated with their actions. Unfortunately, this desperation often leads to the loss of lives in the process.

SUMMARY

For my project, I chose to delve into the deaths of migrants during events when someone died attempting to reach or stay in Europe. This involved exploring the various routes they took on this perilous journey, the harrowing circumstances leading to some losing their lives, and the profound impact on their families and the world at large.

Total Confirmed Dead and Missing Migrants migrating to and in Europe from Year 2000 to 2016



(Events recorded when a migrant was trying to reach or stay in Europe from the year 2000-2016)

Fig1 represents the events on an accurate global map where all the events are shown in “Red Dots” and are annotated with the routes. Deploying this data on an actual map helps one to see which area or country the event occurred. It is evident in this visualization that most of these events happened in the North of Africa, which is one of the entry points to Europe Via the Mediterranean Sea.

The primary objective of this project is to shed light on these events for individuals contemplating similar journeys, offering insights into the challenges they might face. Additionally, it aims to encourage the European Union to implement measures that can prevent these tragic deaths and ensure a smoother transition for migrants, recognizing that migration is an enduring phenomenon.

The data for this project was sourced from <http://www.themigrantsfiles.com>, encompassing events from the year 2000 to 2016. The Migrants’ Files project commenced in mid-2013, filling a void by creating a usable database of individuals who died attempting to reach or stay in Europe. While the project did an excellent job in establishing this database, the last update was four years ago, potentially resulting in a partial representation of current events.

Despite this limitation, working with the existing database provides a fair idea and representation of the challenges migrants face in their quest to reach or stay in Europe. While the information may not be entirely up-to-date, it lays the groundwork for further research to ensure accuracy. The database includes deaths resulting from transportation accidents, shipwrecks, violent attacks, or medical complications during journeys. It also accounts for the number of bodies found at border crossings, categorized as migrants based on belongings and death characteristics. The visualizations presented herein contribute to a clearer understanding of the dataset and the recorded events when a migrant was attempting to reach or stay in Europe.

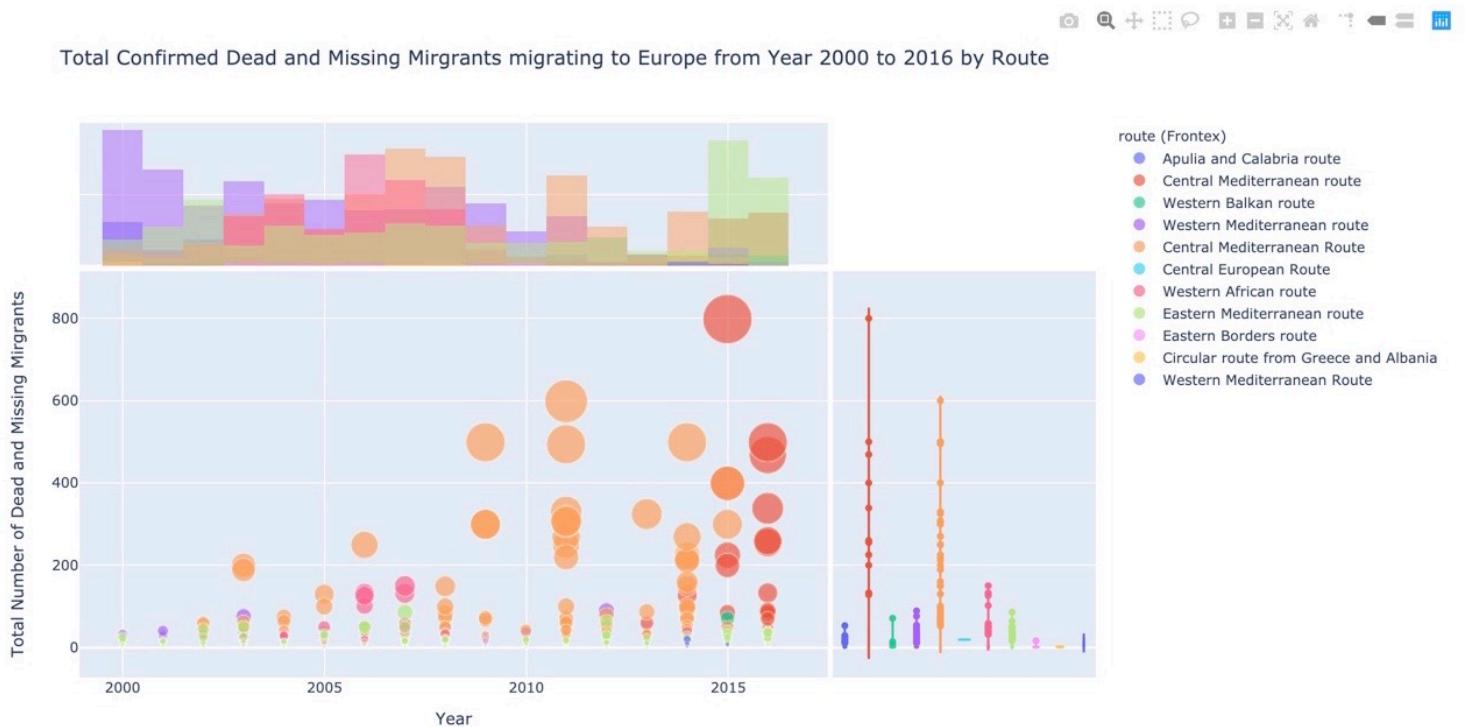


Fig.2 shows the total number of “dead and missing” events visualized using routes to deploy which route the events mainly occurred. The histogram on top counts the number of events that were recorded yearly at each route, while the “violin shape” on the right shows the aggregate number of events at each route. Looking at the legend, it is evident from Fig 2 that most of these events occurred in the Mediterranean, being either central, western, or eastern Mediterranean. All the plots are annotated with the colors associated with these routes.

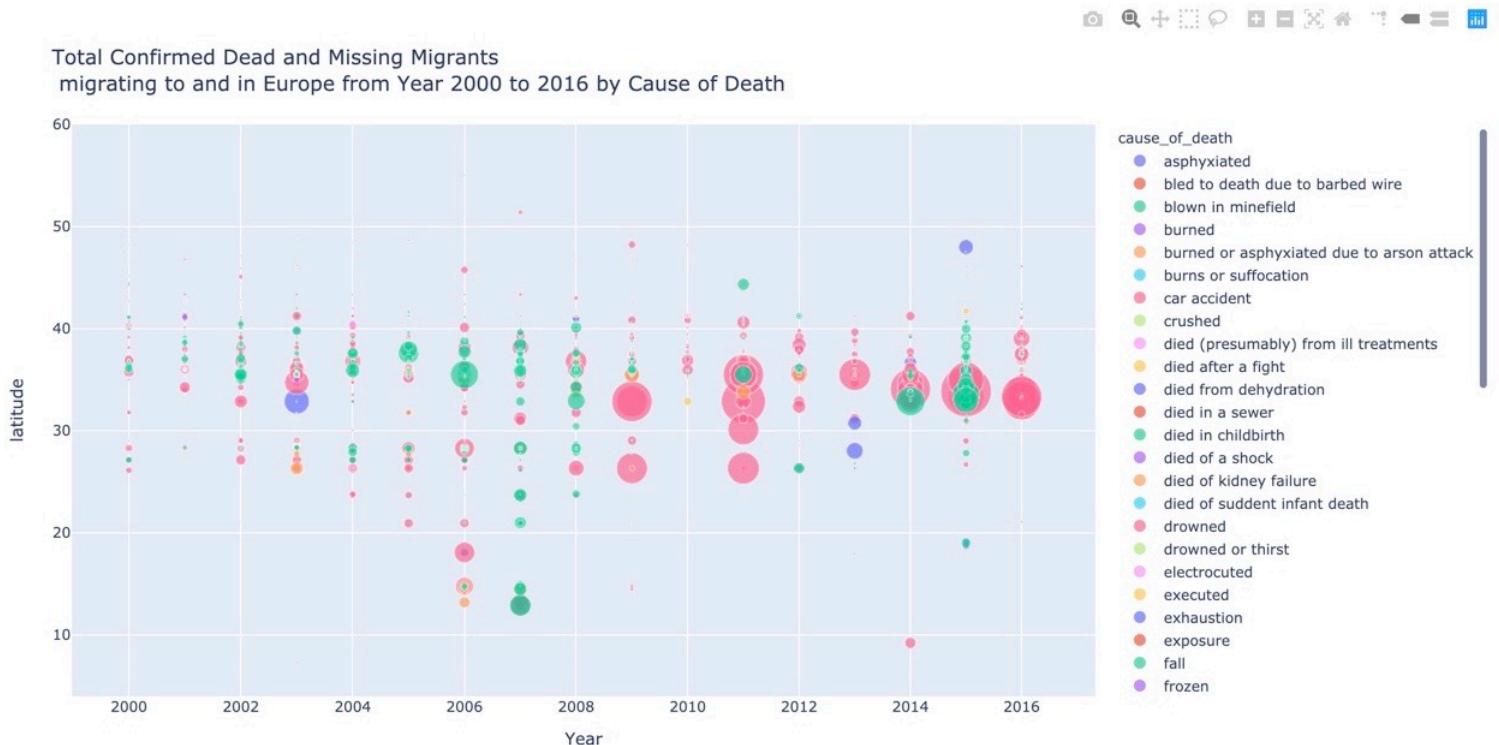


Fig.3. The total number of “dead and missing” events from 2000 to 2016 at each latitude is annotated with the causes of death. It was evident that most of these causes were when the victim drowned, which makes sense, as most of the events occurred on the Mediterranean Ocean, as could be seen in Fig.1.

This project has significantly expanded my understanding of using Python programs. Given my lack of background in this field, I engaged in extensive reading to better comprehend how to write the necessary code. I encountered numerous challenges, particularly during the deployment of my Dash application in Jupyter Notebook. Despite thorough research, I struggled to make it work. Seeking assistance, I reached out to Professor Russell, who guided me in successfully running the code on my Digital Ocean platform.

As Jupyter Notebook allows for code testing, I meticulously wrote and ran all my codes there to ensure they were error-free. Subsequently, I created a Python file on my Digital Ocean using the Nano text editor and transferred all my codes to this file. This streamlined the deployment of my graphs on Digital Ocean. However, I encountered difficulty in maintaining the permanence of the Digital Ocean Dash link. Consequently, I opted for Herokuapp, where I successfully deployed my Dash application.

Additionally, the dataset utilized for this project only covered events from 2000 to 2016. I chose this dataset because The Migrant File Project Data was specifically detailed for these migrant deaths, providing a vivid representation of its contents. Acknowledging that migrants continue to embark on this perilous journey and face tragic outcomes post-2016, I plan to acquire an updated dataset in the near future. I intend to share my findings, emphasizing the ongoing need for measures to aid these individuals.

ADHERING TO THE KOSSLYN'S PRINCIPLES.

Information is communicated effectively only when it focuses the reader's attention and interest on a specific message. The ability to decipher a picture or a graph will make it meaningful to the audience. Every good graph has some essential characteristics that aid in practical interpretation to the audience, whether it is a title that tells what information is being portrayed, a legend that explains symbols and colors used in the graph, or the labels that describe what variables and parameters are being displayed. The displayed graphs have all these characteristics, hence adhering to the Principle of Relevance because the relevant information intended to be conveyed is established effectively with the help of the mentioned characteristics.

It is paramount to know your audience to communicate effectively. One should assume the audience knows only a little. However, the intended information must be well understood by the audience. Knowing one's audience makes the work very easy and effective. The information being shared in this project is very easy to grasp by its audience. There have been several articles and videos on YouTube spelling out the dangers involved in embarking on this journey. Hence, they have appropriate knowledge about this matter. So, knowing the figures will help them think twice when they plan to embark on this journey. The European Union also has the appropriate knowledge about these issues, but few or no measures have been implemented to stop these deaths. The **Principle of Appropriate Knowledge** has been adhered to in this sense.

The **Principle of Discriminability** states that two properties must differ by a large enough proportion, or they will not be distinguished. The **Principle of Salience** states that attention is drawn to significant perceptible differences. In other words, both principles correspond to each other. The main objective of this project was to inform the audience about the deaths of these migrants to keep them informed. The analysis and the projections were differentiated by the years, the number of events that occurred each year, the number of dead and missing, and the routes and places where these events occurred. The years 2009 to 2016 stand out since many events were recorded during these years. In this sense, the Principles of Discriminability and Salience are both adhered to.

The **Principle of Perceptual Organization** states that people are more likely to remember similar things that are grouped, which, in my opinion, is in conjunction with the **Principle of Capacity Limits**, which states that people have limited capacity to retain, process, and understand the message if too much information is to be processed. The information conveyed in this project is organized to be easily grasped and remembered.

It doesn't contain much information that can't be processed and retained. Migrants death, year of events, cause of death, place where the event occurred. This information is quickly processed and kept, thereby adhering to these Principles.

The **Principle of Information Changes** states that the reader will interpret any change in the appearance of a display. Also, the information conveyed in the display should be indicated by a visible change in the display (Graphs). In this project, the information given in the displays was clearly stated by visible changes in the display. From 2000 to 2016, the number of events displayed was differentiated by the size of the plots and the colors annotated to them. So, the bigger the size means, the more events were recorded during that period. Furthermore, the colors annotated to these sizes are categorized by the events' causes, allowing the reader to understand what every color represents, hence adhering to the **Principle of Information Change**.

The **Principle of Compatibility** states that a message is most accessible to understanding if its form is compatible with its meaning. Sparrow (1984) also argued that graph designers must consider task/display compatibility and emphasized that a good display should directly contain the information needed to perform the task at hand and should not require the viewer to transform the display mentally or to compute new relations. The message conveyed in this project is simple to its audience. The displays project a simple message: How people migrating to and trying to stay in Europe might end up losing their dear lives, hence the Migrants Death Project. These displays are compatible with the message being presented.

REPORT

After dissecting this data into pieces and visualizing it, it represents what the dataset is made of. The cause of death, date and year the event happened, number of lives lost in each year, and where the event occurred were all categorized and visualized. It is evident in the visualization that, from 2000 to 2016, about 20,000 deaths and missing migrants were recorded across Europe and en route to Europe. The visualization indicates that most of the dead and missing were recorded on the Mediterranean Ocean. This makes sense because that is the route for migrants from the most underdeveloped and war-zone countries, trying to get to Europe for a better life and greener pastures.

Many migrants have perished just because the government has failed them. The AU and the United Nations are concerned about humanitarianism. It is a fact that no one will go on this

dreadful journey when the system is working in their country. Meaning who will want to leave his country when there is peace, freedom, and justice, when there is job security, gender equality, no wars, no persecution, and the list goes on. Capable men and women complete universities but have no opportunities for employment. Most African leaders are so corrupt that the well-being of their citizens means nothing to them. Corruption has taken deep roots everywhere in Africa, making everything complicated and impossible to achieve. For these and many other reasons, many people who want to better themselves and their family's future embark on this dreadful journey, hoping to make it to Europe to achieve these dreams.

Migrants Enroute to Europe Entry points(Libya, Morocco, Tunisia) from their various countries via the scorching Desert



The Mediterranean Sea has been a significant gateway for thousands of migrants attempting to enter Europe through countries like Libya, Morocco, and Turkey since 2014. Thousands of migrants from Africa and the Middle East attempt to reach the shores of Europe each year, many making the perilous journey across the Mediterranean Ocean.

Migrants are exhausted and resting in the Desert while trying to make it to European entry points.





Migrants coming from Africa travel thousands of kilometers across the scorching desert making their way to these entry points where vast sums of money are taken from them before they are loaded onto wooden or inflated boats for their journey across the Mediterranean.

(Migrants died when trying to make it across the desert to Europe entry points)

Many end up dead before reaching these connecting countries to Europe. It must be emphasized that this entire operation is run illegally by those in charge; hence, they do not value human life. An unfortunate migrant may end up killed if they do not follow even the most straightforward orders. After all is said and done, these migrants are left at the mercy of these boats and the commanding nature of the ocean. Numerous documentaries have been made on this project. The provided link will give you a sense of what goes on in the Mediterranean: [Link](#). Due to the upscaling of data collection, among other reasons, the Mediterranean continues to account for the vast majority of deaths recorded globally. Since 2000, over 20,000 migrant deaths and disappearances have been recorded, with 5,143 in 2016 alone – the highest

(Migrants left at the mercy of the commanding nature of the Ocean.)



the number recorded since at least the year 2000. The Mediterranean crossing has become more dangerous, in large part due to the decrease in migrant flows via the Eastern Mediterranean routes and an increase in the number of crossings in winter months via the deadly Central

Mediterranean route. Since 2002, more fatalities have been recorded on the Central Mediterranean route than on any migration route worldwide, due in part to the longer overseas journey and increasingly dangerous smuggling practices.

On October 18, 2013, Operation Mare Nostrum, a year-long naval and air operation commenced by the Italian government to tackle the increased immigration to Europe during the second half of 2013 when migratory ship wreckages were found off the shores of Lampedusa. During the Operation, at least 150,000 migrants, mainly from Africa and the Middle East, arrived safely in Europe. The Operation ended on 31st October 2014 and was superseded by Frontex's Operation Triton, which operates a smaller search and rescue capability. Unlike Mare Nostrum, Operation Triton focused on border protection rather than search and rescue and worked closer to the Italian Coast. The termination of Mare Nostrum has been criticized as a cause of the increased death rate among migrants to Europe in the Mediterranean, which increased tenfold between 2014 and 2015. Two major migrant shipwreck disasters, which together killed more than 1000 people within a week in April 2015, led to calls to renew the operation but to no avail.

Boats capsized in the middle of the Mediterranean and Migrants held on to their dear lives in the cold waiting and hoping to be rescued or die





In September 2015, the lifeless body of a three-year-old boy washed ashore in Turkey. The world

was shocked by this image, and due to the comprehensive media coverage, compassion for refugees arose in daily conversation and on social media. Without going into details on why this image instilled a little more humanity in us, we might ask ourselves why, as a society, we were not able to find this compassion when 3500 refugees died or went missing in 2014.

In 2018, the NGOs responsible for migrant search-and-rescue operations accused the Italian Government of wanting them to 'disappear' after the offensive launched by Interior Minister Matteo Salvini, who stated that Italy wasn't welcoming towards humanitarian vessels in the Mediterranean. This stance pushed them to end their efforts.



The lifeless body of the 3year old washed ashore Turkey got the world talking



An unfortunate sight where dead bodies are washed ashore in Libya



Migrants demonstrating due to the harsh laws implemented to avoid NGO rescue on the Mediterranean



On July 1, 2019, German captain Carola Rackete was arrested and detained by the Italian government after defying authorities and docking a boat carrying 53 migrants, whom she had rescued in the Mediterranean. Her arrest established her as a symbol of resistance to what humanitarian groups have termed inhumane policies designed to deter migration originating from North Africa. The strict rules, which severely restrict private groups from rescuing migrants from perilous vessels in rough waters, have succeeded in partially slowing down the waves of people seeking refuge in Europe

Capt. Rackete being carried away by the Italian Police for saving the souls of migrants

Migrants, though they carry their burdens to these European countries, help boost the economy when settled. They take on menial jobs that may not even be considered by the citizens. An article published by Jonathan Portes in 2016 enlightens how immigration is good for economic growth in Europe. The article goes on to explain and quotes, 'Economists tend to see a large influx of refugees not as an obligation or a threat but as an opportunity. In particular, Europe faces a major demographic challenge. Our population is aging and, in many countries, shrinking. The EU's total fertility rate is not much over 1.5 children per woman; you don't need to be a demographer to work out the long-term implications. Indeed, if it weren't for migration, the EU's working-age population would already be shrinking.'

The article continues to reveal that in 2014, deaths exceeded births in Greece and Italy (where the vast majority of migrants arrived) and in Germany (where the largest number ended up). Germany's economy is creating jobs faster than the natives can fill them. Surely the answer is obvious. Europe should not only accept refugees but also welcome the consequential increase in the labor force.

As Thomas Piketty, the celebrated author of "Capital in the 21st Century," wrote, the crisis represents an 'opportunity for Europeans to jump-start the continent's economy.' In conclusion, data generated by the Migrant Death Project can be used by various entities – governments, NGOs, human rights organizations, and migrants themselves – to save lives and improve the quality of life for humanity throughout the world."

The Migrant Lives Matter





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