**Cancer Incidence and Mortality across US Counties**

**Team Members**

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| --- | --- | --- |
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**Background**

* Population Analytics on Cancer Treatment Centers in California
  + Machine learning – cured treatment based on age, location of treatment and location of patient, gender, ethnicity
  + Lung Cancer
  + Data Set 1 (NEED): - Leyzer, Henry, Robyn
    - Age
    - Ethnicity
    - Gender
    - Location of Treatment
    - Mortality Rates
    - Treatment Outcome
  + Data Set 2 (at least one): Amar, Andrew
    - Treatment
    - Cost of Treatment
* Backup Topic – Customer Segmentation - Mall

**Motivation**

Tool to use for customer data cancer research – treatment centers vs population

Cost for treatment center

Benefit for treatment center

**Questions to answer**

1. Is there a need for more treatment centers based on population?
2. What are the benefits to more accessible treatment centers?
3. How do we incentivize the development of new treatment centers? / Profitability and community growth data
4. Will lowering the cost of treatment effect the mortality rate?
5. Will age, gender, ethnicity effect the incident/mortality rate?

**Tools/Modules to use**

* Python
* Pandas
* Matplotlib
* NumPy
* SciPy
* HTML
* Tableau
* Excel
* SQL
* Tensorflow
* Keras-Tuner
* etc.

**Data sets to use**

* America Cancer Society
* Census Data in California
* CDC
* <https://www.sciencedirect.com/science/article/pii/S0092867418302290>
* <https://link.springer.com/article/10.1007/s12672-022-00472-7>
* <https://cdas.cancer.gov/datasets/plco/22/#:~:text=The%20Colorectal%20dataset%20is%20a,participants%20in%20the%20PLCO%20trial>
* <https://statecancerprofiles.cancer.gov/quick-profiles/index.php?statename=california>
* <https://data.world/datasets/cancer>
* <https://data.world/adamhelsinger/cancer-rates-by-u-s-state>

**Tasks Breakdown**

* Student 1: Collect/Clean the data.
* Student 2: Dashboard and ….
* Student 3: Visualization and ….
* Student 4: Presentation and ….
* Square: Amar
* Triangle: Henry
* Circle: Robyn
* X: Everyone

**Tasks and timeline**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Date** | **Task** | **Notes** |
| **Seg-1.1** | **May 9** |  | Group Roster and Project Idea Proposal Due |
| **Seg-1.2** | **May 10** |  |  |
| **Seg-1.3** | **May 11** |  |  |
| **Seg-1.4** | **May 12** |  |  |
| **Seg-1.5** | **May 13** |  |  |
| **Seg-1.6** | **May 14** |  |  |
| **Seg-1.7** | **May 15** |  |  |
| **Seg-2.1** | **May 16** |  | 1st Segment Due |
| **Seg-2.2** | **May 17** |  |  |
| **Seg-2.3** | **May 18** |  |  |
| **Seg-2.4** | **May 19** |  |  |
| **Seg-2.5** | **May 20** |  |  |
| **Seg-2.6** | **May 21** |  |  |
| **Seg-2.7** | **May 22** |  |  |
| **Seg-2.8** | **May 23** |  |  |
| **Seg-2.9** | **May 24** |  |  |
| **Seg-2.10** | **May 25** |  |  |
| **Seg-2.11** | **May 26** |  |  |
| **Seg-2.12** | **May 27** |  |  |
| **Seg-2.13** | **May 28** |  |  |
| **Seg-2.14** | **May 29** |  |  |
| **Seg-3.1** | **May 30** |  | 2nd Segment Due |
| **Seg-3.2** | **May 31** |  |  |
| **Seg-3.3** | **June 1** |  |  |
| **Seg-3.4** | **June 2** |  |  |
| **Seg-3.5** | **June 3** |  |  |
| **Seg-3.6** | **June 4** |  |  |
| **Seg-3.7** | **June 5** |  |  |
| **Seg-4.1** | **June 6** | Finalize the project  Mock Presentation | 3rd Segment Due |
| **Seg-4.2** | **June 7** |  |  |
| **Seg-4.3** | **June 8** | PROJECT PRESENTATION | 4th Segment and  Self Assessment Due |

**Presentation**

Divide your presentation steps to tasks and assign it to members.

Map

Description automatically generated