

AegeanSEE

Visualizing investment opportunities in touristic regions of Greece

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Problem Statement

The Greek Aegean Islands offer a fantastic opportunity for economic growth for the country, but have lacked adequate, consolidated information and modeling, so the geography has remained tucked away.

We are addressing the fact that hundreds of islands have been overlooked regarding tourist, real estate, and other ventures.

Aegean Islands Tourism Predictions

- **Idea was introduced by Yannis Charalabidis, Associate Professor at University of the Aegean.**
- **We used information about GDP ratios, income per capita, industry sectors revenue, information on tourists, and spending habits.**
- **With the proper tools and knowledge, an online investment support system we created will multitude of investors (retail, property, food, hotel, etc) better hedge their bets.**

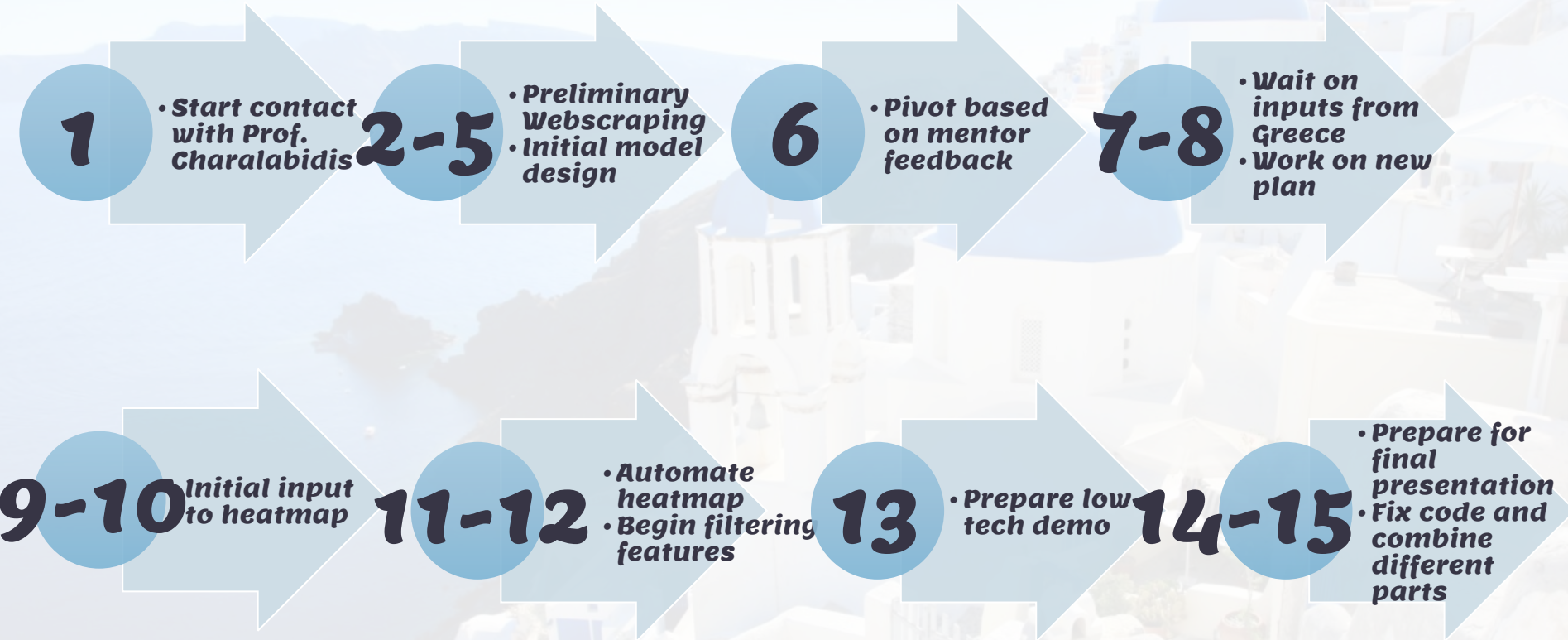


Technical Components

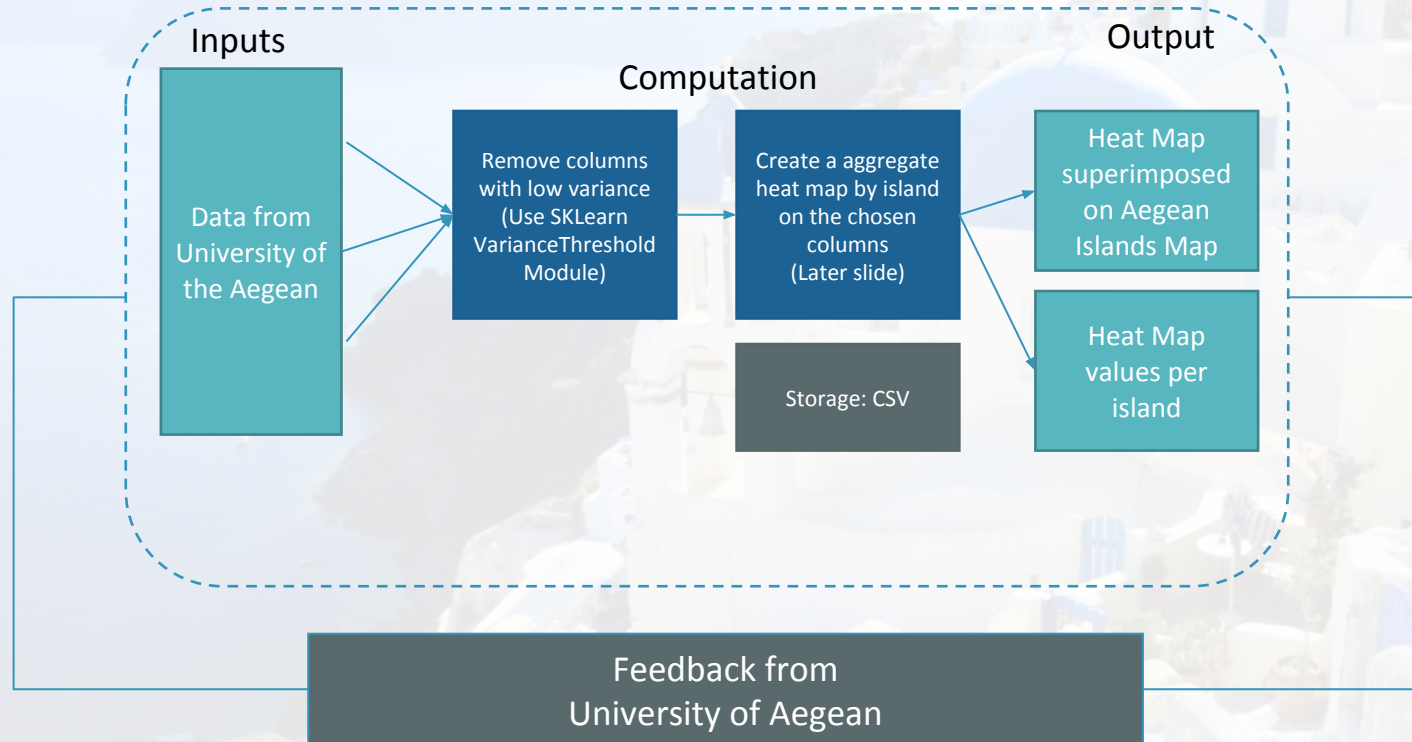
- **Data provided from University of the Aegean**
- **Prioritizing metrics from datasets**
- **UI for the investor target**
- **Heat Map Implementation**
- **Communicating with faculty and industry professionals**

————→ Focus of our project
is on achieving these
three objectives

Road Map




Data Model



	Regional Units	GROSS DOMESTIC PRODUCT AS % OF TOTAL COUNTRY	% PRIMARY SECTOR (2012)	% SECONDARY SECTOR (2012)	% TERTIARY SECTOR (2012)	Building Construction in cubic meters	Floors of new buildings	Value of New Buildings in euro	New Buildings - Number	House Improvements, total volume in cubic meters	...	Females	Females (0-9)	Females (10-19)	F
0	Lemnos	0.7	5.4	7.2	87.4	131733.0	280.0	2136389.0	199.0	15101.0	...	8208.0	827.0	721.0	
1	Lesbos	0.8	5.5	7.3	87.5	131733.0	280.0	2136389.0	199.0	15101.0	...	43839.0	4146.0	4150.0	
2	Chios	0.4	5.7	12.1	82.2	131733.0	280.0	2136389.0	199.0	15101.0	...	26261.0	2433.0	2384.0	
3	Samos	0.3	3.6	7.6	88.8	131733.0	280.0	2136389.0	199.0	15101.0	...	15999.0	1405.0	1423.0	
4	Ikaria	0.3	3.6	7.6	88.8	131733.0	280.0	2136389.0	199.0	15101.0	...	4940.0	417.0	383.0	

5 rows x 109 columns

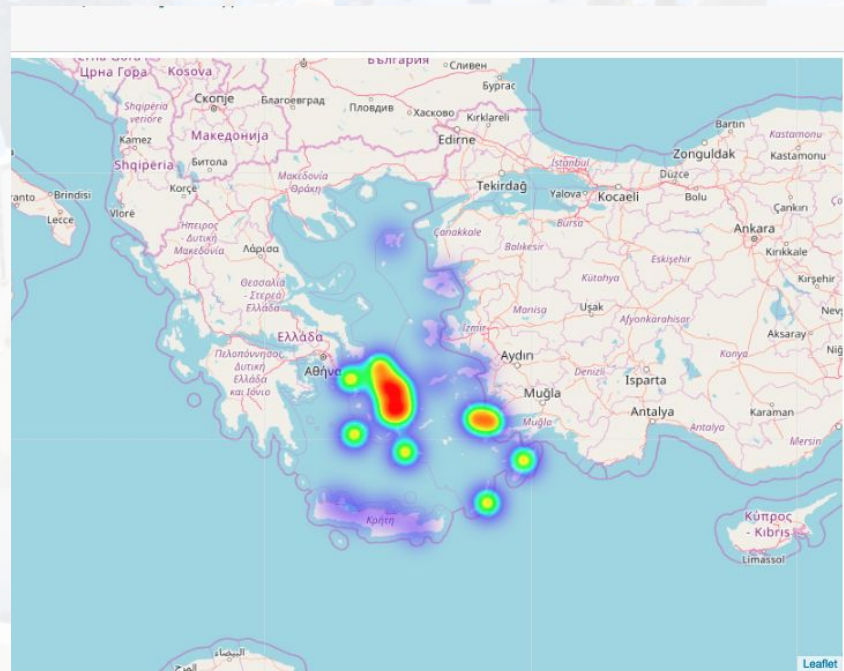


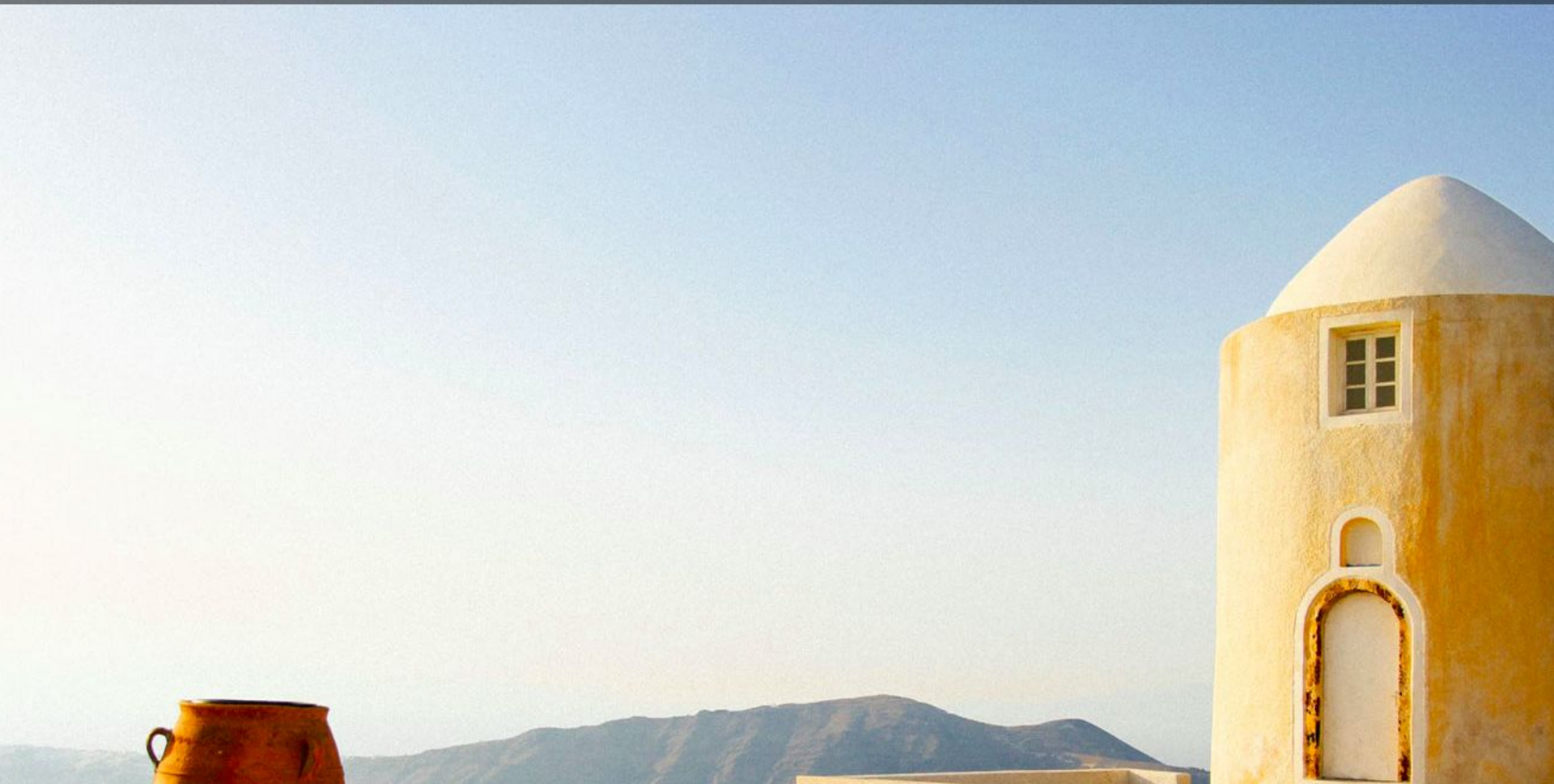
	Regional Units	New Branches with type of activity Industrial Volume (in cubic meters)	New Branches with type of activity Commercial Value (in thous. Euro)	New Houses with 1 room	New Houses with 2 rooms	Headline Gross Domestic Product (in Euro)
0	Lemnos	43116.0	276229.0	47.0	65.0	13394.0
1	Lesbos	43116.0	276229.0	47.0	65.0	13394.0
2	Chios	43116.0	276229.0	47.0	65.0	13394.0
3	Samos	43116.0	276229.0	47.0	65.0	13394.0
4	Ikaria	43116.0	276229.0	47.0	65.0	13394.0



HeatMap

- Took the inputs from csv
- Manipulated data to fit
- Folium and Geopanda





What we learned

- ***Long distance coordination***
- ***Geo-pandas, Folium***
- ***Sklearn.feature_selection***
- ***Better understanding of all things Greece***

Path

- ***Started off with assumption that we would be estimating FDI from GDP***
- ***Pivoted based on mentor input***
- ***Had to research Geopandas and Folium in order to automate creation of heat map***

Next Steps

- **Create predictive model to feed in data to heat map**
 - **Get data over multiple time periods to train ML model on**
 - **Pick best model for regression**
- **Create function to aggregate multiple features**
 - **Will need to understand how different features relate to each other and come up with weight to use in scoring**
- **Work more closely with Prof. Charalabidis and Aegean University**