

Data Science 499 - Senior Project

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Personal Background

I will be taking Math 425 this semester along with CSE 450. I have not completed math 488. After graduating I am planning on further growing the business business I started with my wife and leveraging the knowledge from my degree into social media and business data analytics.

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Project Background

I want to create a dashboard for business owners that will measure their ROI and effectiveness of organic marketing for their business(Specifically Online Businesses). There really are not very many effective tools out their for doing this due to the difficulty in retrieving and comparing analytics from multiple platforms coupled with the fact the paid advertising is much easier to attach a dollar amount to in relation to measuring ROI. In short, this is extremely important for small businesses because organic content marketing is the most cost effective marketing they have and extremely important because small business often do not have large ad budget to experiment with or even run consistent ad campaigns. By having actionable data to make sales and marketing decisions to grow their business while remaining competitive.

Domain to Investigate

In this section, you could note a domain you will need to study during your senior project to be able to complete the work. You could list the critical topics in that domain that will need to be considered. For example, if you were going to do a project around investments and stock trading, you would need to document the domain and list a few key elements that will be helpful in your learning of that domain.

Social Media Marketing - I have a pretty good base in relation to organic content marketing. I will most likely need to learn a lot about Paid advertising and how that is tracked. This will be important in relation to creating the dashboard and creating comparable metrics to compare between running paid ads and organic content marketing.

R-Shiny - Used for building the dashboard.

Machine Learning / Deep Learning - Figuring out the best model to predict content that will do well and generate a return. Currently with the data that I collect for the content that we produce for our own business, there will be several different that are both numerical and categorical that will be factors in relation the the contents performance.

Proposed Deliverables

Possibly collect data from other business (See note below) Learn how to pull data from platforms with an API
Identify how to organize and clean metrics/data between different platforms Use linear regression (maybe an ML model) to identify key trends *User dashboard to display data

- This is in an ideal world. If it proves too difficult to gather the data from these different social media platforms(which is more likely than I would like to admit)I have a back up plan to have user imputed data about the content that they make and its performance. I would then use that data to help content creators and business know what type of content that they make that preforms the best. It might honestly be better to do this than to create the API connections, the data would be more thorough, but less efficient to gather.

Faculty Request

I believe I am registered for 499D.

Note: this section does not need to be filled out if you are registered for the 499D class.