

# Capstone Assignment: Capstone Ideation Write-Up

New Attempt

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**Due** Dec 10 by 1:59am      **Points** 10      **Submitting** a file upload

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***Writing about your potential capstone project helps you organize your own thoughts, and this product scoping work is essential to the outcome of any ML project.***

***This work is to be done individually.***

This is typically the domain of the product manager (or Head of Product/VP Product/CEO at smaller companies). This strategic work is important, and occurs at the intersection of business and tech. Whether you see yourself as a product manager or not, you will be working with someone who leads the product anytime you build ML pipelines outside of research projects or for fun. So we're going to look top-down this week before we dive into the weeds.

The purpose of this exercise is to articulate your "why" for the AI product that you're designing. Ideally, this why will make sense to your fellow ML practitioners so that one or more of them will buy into your vision, and join you.

The more of strategic big-picture work that you do ahead of time, the more likely it is that you'll actually create value!

It will also increase the odds that you're starting off as a strong partner or member of your team.

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*Complete each piece of this general framework:*

## Problem

Write a succinct statement of the problem that you're trying to solve

## Why

Write a few paragraphs about why this is a problem that is worth solving. What is the business value hypothesis?

## Success

Write a few lines about what success looks like. What is the Key Performance Indicator (or couple of KPIs)?

# Audience

Specify exactly which users/customer this digital product is being built for. What is the customer pain or need that connects back to the problem?

# What

Now describe what the MLE looks like. This includes a discussion of data and sources, potential/likely models, a choice of an accuracy metric to optimize for and a defense of your choice. How does your accuracy metric connect back to the KPI named above?


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*Questions to guide your thinking about Capstone Projects:*

1. What is the use-case (Computer Vision, Natural Language Processing, Recommendation Engine, something else?) that will help you progress your career or in the direction of your interests and aims? Think about your next career steps, be it your next job, product design, or startup venture.
2. You are advised to select a topic where you have deep knowledge of the data as opposed to a completely new domain. The duration of the project is relatively short, so you are to remove data as a bottleneck. Additionally, data-centric AI is not possible in domains where you have zero expertise.
3. Think about both the data and the model that you might use, and what its business application could potentially be. The best projects will include data that changes all the time and that you are actively hitting an API to collect new data from, and retrain your models with (e.g., [weatherstack \(https://weatherstack.com/\)](https://weatherstack.com/), [Twitter \(https://developer.twitter.com/en/docs/twitter-api/getting-started/about-twitter-api\)](https://developer.twitter.com/en/docs/twitter-api/getting-started/about-twitter-api), [Reddit !\[\]\(4e333a6106fc298d0ae6dff272a736ef\_img.jpg\) \(https://www.reddit.com/dev/api/\)](https://www.reddit.com/dev/api/)).

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*Deliverables:*

1. Fill out the Problem/Why/Success/Audience/What above for **one business-relevant ML problem** that you believe is most worth solving using [this template](https://docs.google.com/document/d/1yueOa3cFWuNYQKj1cFRy9fC9OsenDrh7aK3vnmbM7BU/edit#heading=h.6tq3m38t38)    
<https://docs.google.com/document/d/1yueOa3cFWuNYQKj1cFRy9fC9OsenDrh7aK3vnmbM7BU/edit#heading=h.6tq3m38t38>
2. **Answer the following questions** to the best of your ability:
  - Why does the project needs a machine learning deployment pipeline?
  - What will the product be able to do when it's done? How will that deliver value to users?
  - What problems are you likely to run into along the way in building this product? What are your known unknowns that you'll need to learn more about?

Criteria	Ratings	Pts
<p>General Framework</p> <p>Problem</p> <p>Write a succinct statement of the problem that you're trying to solve</p> <p>Why</p> <p>Write a few paragraphs about why this is a problem that is worth solving. What is the business value hypothesis?</p> <p>Success</p> <p>Write a few lines about what success looks like. What is the Key Performance Indicator (or couple of KPIs)?</p> <p>Audience</p> <p>Specify exactly which users/customer this digital product is being built for. What is the customer pain or need that connects back to the problem?</p> <p>What</p> <p>Now describe what the MLE looks like. This includes a discussion of data and sources, potential/likely models, a choice of an accuracy metric to optimize for and a defense of your choice. How does your accuracy metric connect back to the KPI named above?</p>		5 pts
<p>Deliverables</p> <p>Why does the project need a machine learning deployment pipeline?</p>		1 pts
<p>Deliverables</p> <p>What will the product be able to do when it's done?</p> <p>How will that deliver value to users?</p>		2 pts
<p>Deliverables</p> <p>What problems are you likely to run into along the way in building this product?</p>		1 pts
<p>Deliverables</p> <p>What are your known unknowns that you'll need to learn more about?</p>		1 pts
Total Points: 10		