MSDS 603 MLOps Final Project

For the final project you will each form groups of 5 students and build an end-to-end ML/AI-powered product of your choice. If you've been tinkering with your own personal project all year and would like to finally complete it, or you think you have a good idea for a startup or just a really fun app, then this is the perfect time to create something to impress.

Requirements

- Your product must be developed enough to do a demo or, preferably, go live
- Your product must utilize AI or ML in some way
    - The AI/ML component should be the feature that differentiates your product from other products that already exist
- Your product must have some kind of UI to interact with
- Your product must be novel, not just a replication of an existing product or using a toy Kaggle dataset
- Each team member must make an approximately equal contribution to the product
- Each team member must have a role in the presentation

Other than these requirements, you are free to build whatever you want. Think "what would look good on my resume?".

Milestones

There are four milestones that each group must meet, by specific due dates, in order to get full credit for the project.

1. Name of team and project pitch: for this milestone you simply need to form your team, give yourself a name, and decide on what your project will be. Write up your project idea as a simple one paragraph pitch. You **do not** need to have the name of the product yet, I know that good names take time.
2. Requirements: for this milestone you will gather all of the requirements for your project. Details for this milestone will be in Canvas.
3. System Design: for this milestone you will draw the system architecture, in detail, including all important services and applications that your product needs. Details for this milestone will be in Canvas.
4. Prototype: for this milestone you should have a simple prototype built out. It does not need to be fully functional yet, but it should be almost ready for the final presentation demonstration. Details for turning this in will be in Canvas.

Turning it in and Presentation

To turn in your project into Canvas you should upload the Github repo URL, URL to live version if available, and a slide deck for your presentation.

For your presentation you will spend 5-10 minutes on the last day of class presenting your product. During your demo you should be able to interact with your product live. Each member of the team should have a role in presenting. Note, we will need to keep the timing to no more than 10 minutes to ensure we get through all teams in the 2 hour slot and take a break in the middle. Bring your own hardware and be ready to connect to the projector – you've done all this before.

After presentations, I will choose 3-5 teams to make a ~1-3 minute recording of a demo of their product to showcase to future cohorts and potentially post on social media. I'm sure all of you will do very impressive work - I will make my selection based on which projects I think are polished enough to show off to the public and future students. Let me know if you want to opt out of this last step.

Previous Projects

If you need some motivation, here are a few projects from previous cohorts.

Mock interview: https://youtu.be/cV3pxeGaZ7U?si=HsopE7ZfNVM6DZIH

Podsicle AI-generate podcast:
https://www.youtube.com/watch?app=desktop&v=3NchZflLfY4&t=3s

Justice data collaborative:
(Demo)https://drive.google.com/file/d/14bJmfTgsuF_GItwed16coKPcrfLKHYq4/view
(website) https://justice-data-collaborative.webflow.io/

Rubric

Here is a general rubric for the milestones and final product and presentation.

Task	Description	Points
Milestone 1	Is the pitch acceptable for this project?	**5**
Milestone 2	How comprehensive and relevant are the requirements that were gathered?	**10**
Milestone 3	Does the system architecture make sense? Are there any obvious gaps?	**15**

Milestone 4	How complete is the prototype? Does it seem thrown together at the last minute?	**20**
Final Product and Presentation	Was the demo interactive, functional, and effective? Did all team members present?	**50**