**Applied Project General Expectation (all students)** Throughout the course, exercises, and case studies you will learn how to apply machine learning to solve real-world problems. With the semester-long project, you are expected to form a team of 2-5 members (graduate students form a team of 2 members) to develop a product that utilizes machine learning to solve a problem for a specific customer base. You are expected to

1. Identify a problem that can be solved using machine learning

2. Acquire a dataset or define underlying rules that you can use to represent the problem

3. Build a machine learning model to solve the problem

4. Illustrate how your solution works from the customer’s perspective

5. Identify and discuss the implications of your solution’s design including ethical implications

**Project Deliverables (both projects)**

|  |  |  |
| --- | --- | --- |
| [Applied Project Proposal](https://elearning.mines.edu/courses/25420/assignments/161202) | Monday, September 21st, 11:59pm | 50 points |
| [Applied Project Update](https://elearning.mines.edu/courses/25420/assignments/161215) | Monday, October 26th, 11:59pm | 50 points |
| Final Presentation (Video/Evaluation) | TBD (End of Semester) - Details Coming Soon | 250 points |

**Example Projects** The following are examples of reasonable projects in terms of scope and complexity:

* Speech-to-text - using annotated audio files to transcribe speech
* Text summarization - summarizing the content of news articles
* Image object identification - identifying animal breeds or car types in images
* Recommender system - recommend products based on previously rated ones and others’ ratings
* OCR - recognize a person’s handwriting or recognize the text in the handwriting
* Avatar photo generation - generate images using GANs
* Othello AI - have 2 AIs play a game against each other

Students are not limited to the above examples and can propose any project that is similar in complexity.