

# COMS 3007: Machine Learning Assignment 2022

## Part 1: The ML Start-up

You are now a machine learning expert! Based on all the cool methods you have studied in this course, you and some friends have decided to go and start a machine learning company! This will be based on an exciting ML idea, make the world (or some industry) better, and hopefully make you all rich.

For this assignment, you are required to put together a “pitch deck”: this is a deck of slides summarising the product idea, as though it was going to be sent to potential funders.

You must submit your slides as a **PDF document** to Moodle, containing the following information (with estimates of the numbers of slides you should use). Note that marks are awarded for all the points listed below, and because we are simulating a funding pitch deck, presentation counts<sup>1</sup>! **This should be 9 – 12 slides in total.**

- (1) The front slide must include your product name, and all your names and student numbers.  
(1 slide)
- (2) Describe the problem you are solving. What is the problem? Who would benefit from this problem being solved? Why do you think there is an opportunity (i.e., why do you think that it has not been sufficiently solved already)? (1-2 slides)
- (3) What is your solution to the problem? Remember: this must be an ML solution. This is the most important section, and so carries most of the marks. **Both the problem and your solution must be realistic.** Make sure you include at least the following: (4-6 slides)
  - Where will you collect the appropriate data, and labels, if needed? How will this be done cost-effectively and reliably?
  - What considerations will you have to think about, regarding data formatting, preprocessing, etc.?
  - What kind of ML is this?
  - What algorithm or methodology will you use? Motivate!
  - Do you expect problems with over- or under-fitting? Why?
  - How will you evaluate if your approach is working as intended?
- (4) How will you roll out or deploy this solution to the real world? Does it require partnerships, will it be built as a website, or an app? (1-2 slides)
- (5) How will your product make a profit? (0.5-1 slide)
- (6) End the slides with a message instilling confidence in your ‘investors’. (0.5-1 slide)

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<sup>1</sup>For this reason, I would recommend NOT preparing your slides in Beamer – no-one would ever fund anything after seeing one of those presentations.

**Important:**

- The due date for submissions is the end of **Monday, 9 May**.
- You must submit and work in groups of **between three and four people** (having more or fewer people will automatically halve your marks). Make sure all your names AND student numbers are on the submission, otherwise you will receive 0.
- After submission, you will receive a form asking about the contributions made by each group member. Your individual marks will be scaled according to these peer reviews, so make sure you contribute fairly to the assignment. Any issues between members of your group are yours to resolve.