

## **Machine Learning for Social Good Tutorial Project.**

Your first task is to pick a project topic. If you're looking for project ideas, please come to tutorials hours, and we'd be happy to brainstorm and suggest some project ideas. Our theme this year is Machine Learning for Social Good.

### **Tutorial Task 1: Data Selection**

You may want to browse the datasets on:

- Kaggle.com
- UCI Repository
- <https://research.google/tools/>
- Or any other repository you deem reasonable.

Typically each dataset is associated with a problem definition, and a prediction goal. You may be inspired to figure out your project topic as you browse through the datasets. You **MUST** discuss this with your TA during tutorials, this is to ensure that the project your team has selected is appropriate.

You have to submit a brief statement of the following (1 page maximum):

- The project's title,
- The project category (education, environment, etc.),
- Full names of all of your team members,
- A couple of sentences of how this is related to ML for Social Good.
- Link to the dataset.
- Conduct a preliminary analysis of the data.

### **Tutorial Task 2: Formulate Your Research Task**

You will need to submit the following. Please be brief and describe the following in a couple of sentences (1 page maximum).

- What problem are you tackling? Define your problem and motivation.
- What machine learning techniques are you planning to apply or improve upon?

You must discuss this with your TA during tutorials.

### **Tutorial Task 3: Evaluate the Methods of Your Choice**

You will need to submit the following. Please be brief and describe the following in a couple of sentences (1 page maximum).

- How will you prepare the data to validate your machine learning algorithm?
- What experiments are you planning to run?
- How do you plan to evaluate your machine learning algorithm?

You must discuss this with your TA during tutorials.

### **Tutorial Task 4: Write and Conclude Your Findings**

Carry out your implementation plan in Task 3. You will need to submit the following. Please be brief and describe the following in a couple of sentences.

- ½ to 1 page of write up
- 3 minutes video to summarise the highlights of your entire project.

Additionally (not included in page limit): For each tutorial task, please include a section that describes what each team member worked on and contributed to the project to make sure team members carry a fair share of the work for projects. If you have any concerns working with one of your project teammates, please discuss this with the TAs and instructors.