



Introduction to Machine Learning

Everyone has heard about Machine Learning or AI, but how does it actually work.

As more of our tools come with inbuilt “AI” this hands on workshop will introduce participants to Machine Learning theory and terms. During the workshop, participants will build and train their own Machine Learning model from scratch to identify different flowers based on Petal and Sepal length.

Through the hands on exercises, students will learn what terms like; Deep Neural Network, Epochs, Activation Functions, Learning rate and Gradient Descent mean.

Participants will need;

- Basic Python knowledge, there is a Python workshop on Wednesday that will give you the knowledge needed
- Their own laptop with internet access
- Access to AARnet CloudStor (we use SWAN to provide the python interface) or similar Jupyter notebook environment

Participants will need to attend both Part 1 and Part 2 to complete the workshop

Depending on time we may get to build and train a fully functioning Object Classifier that uses computer vision to recognise different breeds of dogs based on their pictures. Techniques learned here can be applied to any Object Classification tasks. If there is not enough time to complete this then it may be offered as a separate QUDIT workshop.