Introduction to Machine Learning using Python

UTS Online July 2023

# Housekeeping

## Training and Workshop at Intersect

[Catalogue — Intersect](https://intersect.org.au/training/catalogue)

[Schedule — Intersect](https://intersect.org.au/training/schedule/)

## Training and Educational Events at UTS

[Intersect Training at UTS](https://eresearch.uts.edu.au/training/) (Bookmark me!)

**Introduction to ML using Python: SVM & Unsupervised Learning (**[**Register**](https://www.eventbrite.com.au/e/introduction-to-machine-learning-using-python-svm-unsupervised-learning-at-uts-online-registration-597518372537)**)**

Fri, 14 Jul 2023 10:00 AM - 1:00 PM AEST

**Excel for Researchers (**[**Register**](https://www.eventbrite.com.au/e/excel-for-researchers-at-uts-online-registration-671910070107)**)**

Day 1: Thursday, July 27 from 9:30 AM to 12:30 PM AEST

Day 2: Friday, July 28 from 9:30 AM to 12:30 PM AEST

**Learn to Program: R (**[**Register**](https://www.eventbrite.com.au/e/learn-to-program-r-at-uts-online-registration-671911765177)**)**

Day 1: Thursday, August 10 from 9:30 AM to 12:30 PM AEST

Day 2: Friday, August 11 from 9:30 AM to 12:30 PM AEST

**Data Manipulation and Visualisation in R (**[**Register**](https://www.eventbrite.com.au/e/data-manipulation-and-visualisation-in-r-at-uts-online-registration-671915656817?aff=oddtdtcreator)**)**

Day 1: Thursday, August 17 from 9:30 AM to 12:30 PM AEST

Day 2: Friday, August 18 from 9:30 AM to 12:30 PM AEST

**Surveying with Qualtrics (**[**Register**](https://www.eventbrite.com.au/e/surveying-with-qualtrics-at-uts-online-registration-671944854147?aff=oddtdtcreator)**)**

Fri, 25 Aug 2023 9:30 AM - 12:30 PM AEST

# Course material

<https://intersectaustralia.github.io/training/PYTHON205/>

<https://intersectaustralia.github.io/training/PYTHON206/>

<https://intersectaustralia.github.io/training/PYTHON207/>

# Intersect trainstation

<https://inter.fyi/WU1Av>

# Further learning material

Best Python Libraries for Machine Learning and Deep Learning

<https://towardsdatascience.com/best-python-libraries-for-machine-learning-and-deep-learning-b0bd40c7e8c>

Open-source datasets for ML:

<https://www.kaggle.com/>

Logistic classification with cross-entropy

<https://peterroelants.github.io/posts/cross-entropy-logistic/>

CS229: Machine Learning lecture notes

<https://see.stanford.edu/materials/aimlcs229/cs229-notes1.pdf>

The Bad Names In Classification Problems

<https://kiwidamien.github.io/the-bad-names-in-classification-problems.html>

Difference in hyperparameters for decision tree

<https://stackoverflow.com/questions/46480457/difference-between-min-samples-split-and-min-samples-leaf-in-sklearn-decisiontre>

ML workflow:

<https://docs.google.com/presentation/d/1wN3Oc73Uj4lYBjYsG5-vi79BNO52gvC_GO2qB3IsOZg/edit?usp=sharing>

Useful ML books:

* Hands on machine learning with scikit-learn and Tensorflow 2ed
* An introduction to statistical learning in R
* [3] The elements of Statistical Learning
* [4] Deep Learning book – Ian Goodfellow

# Help Us Help You!

Please complete our very brief **course survey**: <https://inter.fyi/learn/survey>

Get in contact with us if you have questions:

* UTS: [eresearch-it@uts.edu.au](mailto:eresearch-it@uts.edu.au)
* Intersect: [training@intersect.org.au](mailto:training@intersect.org.au)