## COMP20008 2020 SM2 Workshop Week 9: Classification

1. Consider the following data set for a binary class problem and consider building a decision tree using this data

Feature A	Feature B	Class Label
T	F	+
${ m T}$	m T	+
${ m T}$	${ m T}$	+
${ m T}$	F	_
${ m T}$	${ m T}$	+
$\mathbf{F}$	F	_
$\mathbf{F}$	F	_
$\mathbf{F}$	F	_
${ m T}$	T	_
${ m T}$	F	-

- Write a formula for the information gain when splitting on feature A.
- Write a formula for the information gain when splitting on feature B.
- Which feature would the decision tree induction algorithm choose?
- 2. Load the **2020SM2-workshop-week9-classification.ipynb** jupyter notebook and complete the two practical exercises.