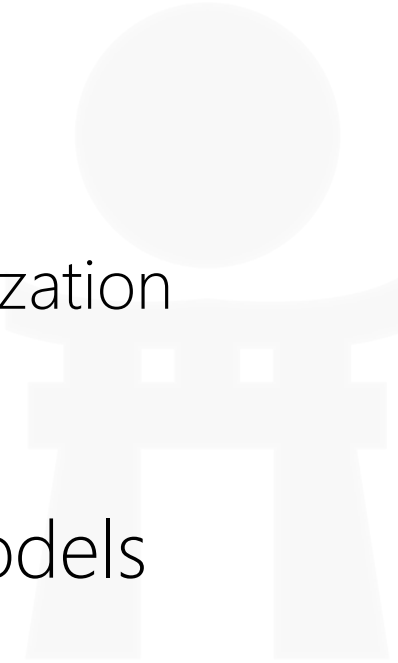




Regression

Gradient Descent, evaluation, and regularization

Agenda

- Introduction
 - Gradient Descent
 - Cost function and minimization
 - Implementation
 - Evaluating regression models
 - Regularization
 - Building a real-estate price predictor
- 



Introduction

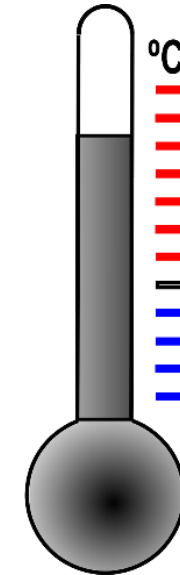
Regression



Sales Forecasts



Housing Price Predictions



Daily Temperature
Highs & Lows

Notation: Titanic Dataset

Passenger Id	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
1	0	3	Braund, Mr. Owen Harris	male	22	1	0	A/5 21171	7.25		S
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Thayer)	female	38	1	0	PC 17599	71.2833	C85	C
3	1	3	Heikkinen, Miss. Laina	female	26	0	0	STON/O2. 3101282	7.925		S
4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35	1	0	113803	53.1	C123	S
5	0	3	Allen, Mr. William Henry	male	35	0	0	373450	8.05		S

x_4^5

5: The passenger is in the 5th row

4: The passenger's name is the 4th column