

# Better modelling of aircraft taxi movements

Anoosid Kiatkamolvong - MSc Big Data  
Supervised by Dr Sandy Brownlee

## Problems

- Inefficient taxiing from the terminal to the runway usually causes delay.
- Aircrafts over consume fuel due to bad taxiing
- Automated systems for routing the aircraft can improve the efficiency of taxiing. To make the system, it requires a model for predicting taxi time.



## Project Aim

- To create accurate models to predict taxi time from the data from the airports
- To extract more features from the raw data

## The Data

- The data is from Manchester airport, Zurich airport, and Hong Kong airport including distance, airline: how many aircraft were moving at the same time, weather, etc.

## Methodology

- Linear Regression
- Decision Tree
- Multilayer Perceptron
- Random Forest

## Result

Accuracy from random forest with 10-fold cross validation= 0.6952537282536484

