

# SUM YU NG

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 <https://github.com/sumyu199>

## Education

University of Nottingham (UK)  
Bachelor of Financial Mathematics

2018 - 2021

Risk, Information & Insurance (70)

Discuss behavioural approach and traditional approach to risk so as to evaluate the role of insurance

International Finance (73)

Explore the foreign exchange market and discuss management of Exposure of foreign exchange

University of Nottingham (UK)  
Engineering and Physical Sciences Foundation Programme  
Average score:87

2017 - 2018

Tsuen Wan Public Ho Chuen Yiu Memorial College (HK)  
Hong Kong Diploma of Secondary Education  
Maths 5 | Chinese 4 | Liberal Studies 4

2011 – 2017

## Skills

### Tools & Technologies

- Analyse Data with Python (with project)
- Build a Machine Learning Model with Python (with project)
- Analyse Data with SQL
- Microsoft Excel
- Google Analytics
- HTML & CSS (Personal Website)
- Rstudio (With Project)
- Tableau (With Project)

Google Course: Share Data Through the Art of Visualization (Grade Achieved: 85)

### Languages

- Cantonese
  - Mandarin
  - English
- Coursera GTC Statement of Accomplishment  
Contributed at least 15,000 words of high quality translation in Coursera.

## Project

Following projects' details are all shown on my personal website

### 1. Data Preparation and Visualisation (Jupyter Notebook)

This project is a data preparation task of Quantum Data Analytics Virtual Experience Program and the database files included the customer purchase data and transaction data.

- To start with, **data cleaning** and **data merging** are required.
- To explore the data, I used **matplotlib** to visualize the data and defined the target customer segments so as to **reduce the dimension**.
- Finally, I **deep dived into those segment** to investigate the preference of our target customer so as to develop an efficient market strategy.

Inspired by this task, I decided to create a **Tableau dashboard** to tell the story of the data with different charts.

### 2. Technical Analysis (Python)

This application is using YahooFinance as the data resource and **streamlit** as the framework of the application to process the technical analysis of stock in a shareable **application**.

- To only collect the data that the user interested, I created a datareader function with **pandas** datareader to take the input parameters from users and retrieve data from YahooFinance.

- Once the data is collected, the close price of the ticker will be analysed with **Bollinger Bands With RSI, Moving Average Convergence Divergence and On-balance Volume** and in these functions, **window functions** are frequently used. Also, all the results are plotted by **plotly**.
- Finally, the next day close price is predicted by **Support Vector Regression** from sklearn with Radial Basis function kernel, Polynomial regression and Linear Regression.

### 3. Logistic Regression Predictor (R studio)

This project is to build a predictor model for the **classification** of received a medal or not and the data is included athlete information of Olympics 2012

- To ensure, there is no NA value that will affect the future calculation, I filled all the NA values with mean and transform the Medal column (label) into binary structure.
- For the features, I visualised the data and applied **t-test** on both non-medalists and medalists to prove the hypothesis that medalists have beneficial features to win
- Next, the data is **split into training and testing sets**.
- Finally, I decided to use logistic regression glm to build the model as **logistic regression** is Suitable for classification. The features are decided by applying **z-test and p-value** and the classification prediction **accuracy is about 81%**.

### 4. Decision Trees Predictor (Jupyter Notebook)

This project is to use the historical data of titanic passengers to create a predictor to predict whether the passenger survived or not.

- To start with, I used **lambda and numpy** to clean the data and examine the **correlation** of features.
- Next, I selected different sets of features to create several models and split the data into **reproducible training and testing sets**.
- Finally, I created both **random forest classifier and decision tree classifier** and as the decision tree with the best depth has a higher score than forest, so decision tree is decided to be the final model. This model is **scored 0.7799** in Kaggle.

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## Certification

Microsoft Certified: Azure Fundamentals

A certificate indicating candidate is equipped with basic knowledge and concepts of cloud-based solutions and services of Azure.

Microsoft Certified: Azure Data Fundamentals

A certificate indicating candidate is equipped with basic knowledge and concepts of data aspect of Azure

Linkedin Excel 2016 Essential Training with NASBA

Pass the exam with at least 70%

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## Experience

Temp. Assistant | Data Entry and Activity Organisation June 2018 – Sept 2018

United Social Services Centre (HK)

I have been working as a temporary assistant which improved my Skill in excel from data organisation. In addition, my duties of contacting service users and reply their query improved skills of communication and customer service. Also, I helped organising activities with my team.

Tutor | Tutoring

Dec 2017 – Jan 2018

Master Talent Education Consultancy Limited

I tutored primary school kids their school work and due to the age I need to explain the work in a simple way and being patient.