
EDUCATION**• University College Dublin**

Dublin, Ireland

*Master of Science in Computer Science; GPA: 3.48**Sep. 2017 – Sep. 2018*

- **Main Modules:** Data Mining (Rapid Miner), Machine Learning (Weka), Text Analytics, Information Visualisation (d3.js and Tableau), Advanced Machine Learning (scikit-learn, Pandas, and Keras), Connectionist Computing (ANNs), Big Data Programming (bash, Hadoop MapReduce, and Spark), Advanced Data Structures in Java (Algorithms), Recommender Systems & Collective Intelligence (Collaborative Filtering and Crowdsourcing)

• Ningbo University

Ningbo, China

*Bachelor of Engineering in Software Engineering; GPA: 3.84**Sep. 2012 – Jun. 2016*

EXPERIENCE**• Zalando SE**

Dublin, Ireland

*Data Science Intern**Summer 2018*

- **Customer Segmentation(zTypes):** Zalando is the biggest online fashion store in Europe. Built models to classify customers into one of zTypes according to their browse data on Zalando online store. This can help identify customers' affinity with different brands, so that Zalando can advertise them similar brands.
- **Dev Environment:** Analytics environment based on AWS, standardised Apache **Spark** and **Scala** dependencies. Deployed Spark applications on clusters in Amazon **EMR**, and interacted with customer data(stored as Apache **Avro**) in **S3**. Version control on **Github**. Worked in **Agile** environment.
- **Modelling:** Performed data cleaning and transformation to create features. Also set thresholds to reduce noise further during label generation. Built a multinomial model(based on **Logistic Regression** Model in Spark Machine Learning library). Trained the model on last several months of customer browse data, and tuned hyper-parameters using CrossValidation and GridSearch.
- **Evaluation:** Applied basic evaluation metrics on each target zType. Used **lift analysis** on top N customers and visualised the lifts to compare with the benchmark.
- **Job Monitoring:** Used **Ganglia**, a scalable distributed monitoring system for clusters, to monitor the conditions of each worker node, like free memory percentile and CPU IO wait. Inspected Spark job executions in **Spark UI**. Analysed log in **Scalyr**, a log monitoring system, to solve problems.

• Uni-tech Zhejiang

Ningbo, China

*Software Engineer Intern**Sep 2015 - Mar 2016*

- **Web application - Java EE:** A task management system for local authority supervisors to assign officers tasks(normally checking local restaurant industry legal requirements like sanitary conditions), and to analyse follow-ups by visualisations. Also provided an interface for managing content on Android app.
- **Android Application:** A mobile application by which officers can perform tasks and record details on site. Made several customised UI by reusing the Fragments in different layouts to enhance user experience, and optimised coordinate display on maps(ArcGIS).
- **Web Service:** Service based on **REST** for providing the interaction between the mobile app and **Oracle** database. It was the bridge between the mobile app and database. The mobile app rendered the content from database by requesting WebService.

PROJECTS (*more at www.qirunchen.com*)*Skills: Python, scikit-learn, NumPy, Pandas, JavaScript*

- **Gapminder Bubbles - Data Visualisation:** Gapminder Bubbles is a tool developed by a public health expert Hans Rosling. The interactive bubble chart presents an animation with statistical and historical data about the development of the countries of the world with respect to lifespan, income, and population. I recreated this bubble chart using **d3.js**, a **JavaScript** library for data visualisation.
- **Super Learner Classifier - Stacked Ensemble Algorithm:** Implemented the stacked ensemble classifier described in Super Learner In Prediction(van der Laan et al, 2007) based on **scikit-learn**. This is a classification model that uses a set of base classifiers of different types, the output of which are combined in another classifier at the stacked layer.
- **Multi-layer Perceptron:** Implemented a simple multi-layer perceptron using **Backpropagation** algorithm with stochastic gradient descent. It can learn XOR and Sin functions very well. Also trained the model on public Letter Recognition Data Set(clean and extracted features) to recognise people's handwriting.