SONG (RACHEL) HU

s42hu@edu.uwaterloo.ca| GitHub: github.com/goldpiggyR | (LinkedIn) www.linkedin.com/in/rachelsonghu/

Professional Summary

- Highly motivated and strong interests in machine learning and neuroscience
- Experienced in **deep learning** algorithms (CNN, RNN, LSTM etc.) of **Python** (NLTK, Scikit-learn, SpaCy, Keras, TensorFlow NumPy & Pandas)
- Solid financial mathematics and statistical modelling knowledge from taking all **advanced** mathematics courses

Working/Research Experience

Data Scientist Intern   05/2017 to 04/2018(EXP.)
Ultimate Software – San Francisco, United States

- Built **natural language processing (NLP)** models to distinguish different workplace themes by using **Python** (NumPy, SciPy, NLTK, Scikit-learn, SpaCy & TensorFlow)
- Trained **machine learning** models to predict emotional positive scores (EPS) of employee surveys
- Analyzed on trending and **time series analysis and prediction** on customer' rating data to offer insights by applying different statistical methodologies such as ARIMA, factor analysis, Fourier analysis, etc.
- Researched on **graph analysis** and graphical models and prototyping its application on survey data

Undergraduate Research Assistant   03/2017 to 04/2017
University of Waterloo – Waterloo, Canada

- Researched on non-negative matrix factorization (NMF) application on dimension reduction of NLP by using Twitter raw screaming data

Total Portfolio Management Intern   09/2016 to 12/2016
CPP Investment Board – Toronto, Canada

- Assisted researching on Total Portfolio Management risk model using Python Pandas & NumPy
- Researched on presidential election influence on CPP portfolio with different risk theories

Portfolio Engineering Intern   09/2015 to 12/2015
CPP Investment Board – Toronto, Canada

- Programmed and executed **MATLAB** to develop quantitative models in **top down asset pricing**
- Identified and captured attractive sources of alpha for macro-economic research initiatives

Education

University of California, Berkeley

   Candidate of Mater of Arts (M.A.), Statistics – Class 2018

University of Waterloo - Waterloo, ON, CANADA

   Bachelor of Mathematics: Mathematical Finance & Statistics   2013.9-2018.6(EXP.)

- Cumulative average   **90.19/100**
- Dean's Honors List & Faculty of Mathematics Scholarship & UW President's Scholarship   2013 – 2017
- Courses: Time Series Forecasting, Estimation & Hypothesis Testing, Real Analysis, Fourier Analysis

Courses & Projects & Achievements

- Coursera: Deep Learning AI Specialization (Finished)
- Kaggle Competition: Toxic Comment Classification Challenge (Ongoing)
- TD CMRM Bitcoin Competition: Top 6 out of 83 teams
- Certificates:
  - Financial Risk Manager (FRM) – Level I – Passed
  - Certifications of SOA: Probabilities, Financial Mathematics & Models of Financial Economics -- Passed