Hanning Su

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INTRODUCTION

Actuarial student at the University of Melbourne. Loving Mathematics, curious about why things are the way they are, and unrelentingly seeking to become a researcher standing on the crossroad of statistics and mathematics.

EDUCATION

University of Melbourne, Melbourne, Australia — *Bachelor of Commerce*

March 2017 - November 2019

Related Courses:
Linear Algebra, Econometrics, Statistics, Real Analysis, Linear Statistical Models, Modern Applied Statistics

Weighted Average Mark: 79.375 (Approximately 3.7 GPA)

University of Melbourne, Melbourne, Australia — *Master of Actuarial Science Extended*

March 2020 - Now

Related Courses:
Probability for Inference, Financial Mathematics, Mathematical Statistics, Life Insurance Models (Survival Analysis), Data Analytics (Statistical Learning), Inference on Spatio-Temporal Processes

Weighted Average Mark: 85.2 (Approximately 3.94 GPA)

Harvard Extension School, Online

September 2020 - December 2020

Related Courses:
Multivariable Calculus, Linear Algebra and Real Analysis I, Time Series Analysis with Python

GPA: 4.0

Stanford Online, Online

Jan 2021 - Mar 2021

Related Courses:
Deep Learning, Introduction to Stochastic Process I

Grades: A- and A, respectively

STANDARDIZED TEST

GRE: 330
(Verbal: 164 Math:166)

TECHNICAL SKILLS

Programming Languages:
C, Python, R, Javascript, SQL, Matlab

Statistical/Scientific computing softwares:

Spyder, Rstudio, Jupyter notebook, Latex compilers, ArcGIS, SPM

Web technologies:

HTML, CSS, Django, Flask, Bootstrap

AWARDS AND ACHIEVEMENTS

Dean's Honors List 2018

Edx/Coursera Certification of Achievements:

1. Introduction to Computer Science and Programming using Python (MITx)
2. Deep Learning Specialization (DeepLearning.AI)
3. Using Python for Research (Harvardx)
4. Principle of fMRI I (John Hopkins)
5. Principle of fMRI II
6. Introduction to Differential Equations (MITx)
7. CS50x (Harvardx)

RESEARCH EXPERIENCE

Radical or incremental: which type of innovation do stock options drive?, Dalian, China and Melbourne Australia — *1st author, published on Technology Analysis & Strategic Management (CTAS) (doi: https://doi.org/10.1080/09537325.2021.1951696)*

January 2018 - November 2020

- Selected topic, questions to address and research methodology
- Collected data, cleaned and combined datasets from multiple databases using tidyverse
- Implemented regression models and robustness checks using R

How Strategic Corporate Responsibility Pays Off? Evidence from Corporate Innovation, Dalian, China and Melbourne Australia — *corresponding author, accepted by South African Journal of Business Management (doi: https://doi.org/10.4102/sajbm.v52i1.2577)*

January 2020 - Mar 2020

- Selected topic, questions to address and research methodology
- Collected data, cleaned and combined datasets from multiple databases using tidyverse

Analysis of China's Carbon Emission Driving Factors Based on the Perspective of Eight Major Economic Regions, Dalian, China and Melbourne Australia — *3rd author, published on Environmental Science and Pollution Research (doi: https://doi.org/10.1007/s11356-020-11044-z) online on 14 October 2020*

February 2020 - Aug 2020

- Collected and processed data using tidyverse
- Formatted the paper using Latex per the requirement of the publisher
- Reimplemented the empirical analysis in the paper using R-ArcGIS to ensure reproducibility of outputs originally produced

Empirical Analysis of Energy Consumption Transfer in China's National Economy from the Perspective of Production and Demand, Dalian, China and Melbourne Australia — *3rd author, published on Environmental Science and Pollution Research (doi: https://doi.org/10.1007/s11356-020-11983-7) online on 04 January 2021*

April 2020 - October 2020

- Collected and processed data using tidyverse
- Formatted the paper using Latex per the requirement of the publisher
- Reimplemented the empirical analysis in the paper using R to ensure reproducibility of outputs originally produced

Symposium

fMRI (functional magnetic resonance imaging) online symposium hosted by Harvard Assistant Professor Yanmei Tie

July 2021 - October 2021

- Used Nipype (python package) to build image preprocessing and statistical analysis workflow
- Presentation on basic (Resting-State) rs-fMRI
- Presentation on machine learning applications on rs-fMRI

PROJECTS

Patent Technology Classification and Citation Level Projection

Report Link:
https://github.com/suhanning1997/CS230-Final-project/blob/main/CS230_Final_Report.pdf

Jan 2021 - March 2021

- Collected and assembled datasets (Available at: https://github.com/suhanning1997/Patent-5-year-citation-dataset-creation)
- Trained word vectorization model and extracted word vectors
- Implemented a procedure to circumvent huge RAM demand using Keras generator to feed millions of stacked word vectors into the model for both training and prediction purposes (Available at: https://github.com/suhanning1997/Multi-functional-Keras-generator)
- Implement Recurrent Neural Network LSTM model for prediction tasks
- Achieved 70% accuracy on technology classification
- Achieved 99% precision and 80% recall identifying top 1% most cited patents

Some minor projects and datasets are available on my GitHub:

https://github.com/suhanning1997

Personal Website:

https://suhanning1997.github.io/hanningsuhomepage.github.io/

INTERNSHIPS

Ernst & Young Global Talent Hub (Dalina) Limited — Dalian, China

December 2016 - Jan 2017

- Rolled-forward financial statements and calibrated data in the financial statements
- Filled confirmation forms and contacted customers

JPMorgan Chase & Co. — Online

December 2018 - Jan 2019

- Created a league table from Supra, agency, and regional government bonds data using EXCEL and analyzed their issuance pattern, identified a subtle inconsistency in the source data
- Presented policies regarding SSA (Sovereign, Superannationals, and Agencies) market
- Researched and reported on geopolitical risk and its impact on the financial market
- Powerpoint presentation on the working mechanism of various derivative securities