Hanning Su

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INTRODUCTION

Statistics student at Columbia University. Loving Mathematics, curious about why things are the way they are, and unrelentingly seeking to become a researcher standing at the crossroad of statistics, machine learning, 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 - June 2022

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: 84.1 (Approximately 3.91 GPA)

Harvard Extension School, Online

September 2020 - September 2021

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

GPA: 4.0

Stanford Online, Online

January 2021 - March 2021

Related Courses:
Deep Learning, Introduction to Stochastic Process I

Grades: A- and A, respectively

Columbia University, New York, United States - Master of

STANDARDIZED TEST

GRE: 330
(Verbal: 164 Math:166)

TECHNICAL SKILLS

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

Statistical/Scientific computing softwares:

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

Web technologies:

HTML, CSS, Django, Flask, Bootstrap

AWARDS AND ACHIEVEMENTS

1. Dean's Honors List 2018
2. 2022 Melbourne Graduate Scholarship
3. Dean's Honors List 2022

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)

Arts

September 2022 - August 2023

Related Courses:
Probability Theory, Statistical Inference, Linear Regression Models, Introduction to Modern Analysis I

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 and Stata
- Wrote Manuscript

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 - January 2021

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

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 - August 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 the results

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

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 ensuring reprodicibility

PROJECTS

Patent Technology Classification and Citation Level Projection

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

January 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 - January 2017

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

JPMorgan Chase & Co. — Online

December 2018 - January 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