CHENGHAO XI

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EDUCATION

Queen's University, Kingston, Canada *September 2024 -*
PhD student in Economics

Queen's University, Kingston, Canada *September 2023 - August 2024*
Master student in Economics | Graduate Scholarship: $12000
Core Courses: PhD Math Review Camp, Advanced Microeconomics(PhD-level), Quantitative Methods(MA-level Econometrics), Empirical Microeconomics etc.
GPA: 3.94/4.3

University of Toronto(St.George), Toronto, Canada *September 2019 - June 2023*
Honors Bachelor of Science | Double major in Economics and Mathematics, minor in Statistics
Core Courses: Calculus, Linear Algebra I&II, Probability and Statistics, Methods of Data Analysis, Applied Econometrics, "Markets, Competition, and Strategy", etc.
GPA: 3.48/4.00, Dean's List Scholar (2020)

RESEARCH INTEREST

Empirical Microeconomics, Industrial Organization, Labor Economics

WORK EXPERIENCE

Department of Economics, Queen's University, Kingston, Canada
Graduate Research Assistant | Supervisor: Prof. Robert Clark *November 2023 - January 2024*
- Use Selenium package in Python to write web crawlers to collect Ontario credit union merger information
- Perform exploratory data analysis(EDA) on the variations of Ontario credit union market structure over time using Python packages such as Pandas, NumPy and Matplotlib
- Read relevant papers and make progress report to supervisor to discuss the potential directions of future research

Graduate Research Assistant | Supervisor: Prof. Karen Ye *May 2024 - April 2024*
- Use Stata and Python to clean the data set
- Read papers on eliciting objective measure of subjective parental beliefs on child and replicate the elicitation process
- Study the use of Aggregated Relational Data (ARD) by replicating social network models in R

Graduate Teaching Assistant *September 2023 - April 2024*
- Hold weekly office hour for Intermediate Microeconomics Theory (ECON212), answering questions from students
- Liaise with students and professors to clarify confusions in assignments, grading and other course-relevant issues
- Work with other TAs to grade assignments, proctor exams and complete other ad hoc tasks

Bosch (China) Investment Ltd., Shanghai, China *December 2020 - June 2021*
Data Intern, Marketing and Business Coordination Department
- Cleaned quarterly OE data of aftermarket car parts using Pandas in Python in combination with Power BI
- Updated monthly vehicle database by reading data into python and using package like Pandas and NumPy
- Wrote Python program to partially realize office automation such as file merger/splitter and automatic error checker.
- Created templates of road maps and timelines of product escalation procedure for internal uses
- Completed other tasks like document writing and releasing, model checking, market feedback collection etc.

ACADEMIC PROJECT

Effect of Firm Productivity on Decision to Export and Firm-Level Outcome *January 2023 - April 2023*
ECO475: Applied Econometrics II (Toronto), Term Paper
Instructor: Professor Ismael Mourifié, Course Grade: A
- Studied how firm-level productivity affects export participation using World Bank Enterprise Survey Data
- Recovered Total Factor of Productivity from the data with fixed effect regression and accounted for endogenous capital input by treating price of the raw materials as an IV in Stata
- Accounted for selection bias in export participation in Stata when estimating the effect of exporting volume on firm-level R&D investment and domestic sales
- Found selection effect in export participation due to high productivity as well as positive impact of exporting volume on domestic sales and R&D investment
- Summarized all empirical results and authored a 23-page term paper with LaTeX

What is the Effect of the Spending on Internet & Computer Equipment of Public Libraries on the Number of Public Library Users? *September 2023 - December 2023*
STA302: Methods of Data Analysis I (Toronto), Term Paper
Instructor: Professor Mohammad Kaviul Anam Khan, Course Grade: A+
- Assessed whether increasing spending on public library's internet facilities would encourage more people to become the registered users at public libraries
- Used Ontario public library statistics collected in 2019 to perform exploratory data analysis(EDA) by coding correlation matrix on selected variables in R
- Performed Box-Cox transformations on raw data and specified several regression models based on results from EDA
- Ran regression diagnosis, cross validation plot and computed criteria like F-tests(full and partial), AIC, BIC etc. in R to select the best model
- Discovered that for every 1% increase in the spending on the computers and internet equipment, there will be a 108% increase in the number of active users in Ontario public libraries
- Compiled all the R codes and output in R markdown and knitted a 11-page term paper

Effects of GDP and Human Development Index on the Number of Covid-19 Cases *January 2022 - April 2022*
ECO225: Big-Data Tools for Economists(Toronto), Term Paper
Instructor: Professor Nazanin Khazra, Course Grade: A
- Studied the relationship between GDP & HDI with Covid-19 variants cases through linear regression and regression tree model using Sklearn
- Used data from 120 countries over a year and conducted exploratory data analysis through data cleaning, visualization and web scrapping, with Python Pandas, matplotlib etc.
- Concluded that consumption related to activities that promotes the transmission of Covid-19(e.g. travelling, hospitality etc.) contributes to the cases of concerned variants
- Found positive correlation between HDI and cases of concerned variants but the mechanism is yet to be explored
- Generated a 26-page term-paper with various visualizations of data via Jupyter Notebook

SKILLS

Languages:	Mandarin(Native), English(Proficient), French(Fluent, Level B2 certified with DELF)
Programming:	Python (completed 2 Coursera Specializations offered by University of Michigan: *Statistics with Python, Applied Data Science with Python*), MATLAB, R, Stata
Software & Tools:	Jupyter Notebook, R markdown, LaTeX