

Collin Zoeller



colzoel



colzoel.github.io



collinzoeller

EDUCATION

Brigham Young University

Bachelor of Science: Economics, Emphasis in Econometrics

Minors in Mathematics, Spanish

- GPA 3.81
- Courses include: Advanced Linear Algebra, Advanced Macroeconomics, Advanced Econometrics

Apr 2023

Provo, UT

CONTRIBUTIONS

Denes, Matthew, Lagaras, Spyridon and Tsoutsoura, Margarita, 2024, Evolution of the Relationship between the Gig Economy and Entrepreneurship: The Heterogeneous Effects of Labor Market Disruptions

Research Associate

- Big data analysis of anonymized administrative US tax data
- DiD to identify incentives for flexible labor among women during the COVID-19 pandemic

Denes, Matthew, Lagaras, Spyridon and Tsoutsoura, Margarita, 2023, Entrepreneurship and the Gig Economy: Evidence from U.S. Tax Returns, Revise & Resubmit at the *Journal of Financial Economics*

Research Associate

- Big data analysis of anonymized administrative US tax information
- DiD to identify the effects of gig work experience on entrepreneurial success

Denes, Matthew, Lagaras, Spyridon and Tsoutsoura, Margarita, 2023, First Come, First Served: The Timing of Government Support and Its Impact on Firms

Research Associate

- Big data analysis of administrative credit bureau data
- DiD to identify effects of policy timing during the COVID-19 pandemic

PROJECTS

'StataHelper' Python Package for PyStata Parallelization

August 2024

Author

Pittsburgh, PA

- Wraps PyStata API and bridges syntax for simpler implementation
- increase productivity with user-friendly multiprocessing
- Open-source availability on PyPi and GitHub, discussion on Medium

'Reverse Indexing' App for Data Validation in Handwriting Recognition Models

Sept 2022-July 2023

Research Assistant, Coauthor

Provo, UT

- Compare ML handwriting recognition with conventional transcription of historical documents
- Compare current human validation (2nd pass) with app that crowd-sources data validation

City Directory Conversion, Applications of Machine Learning

May 2022-July 2023

Computer Vision Programmer and Research Assistant for HBS Ph.D. Candidate

Cambridge, MA /Provo, UT

- Built custom ML pipeline utilizing image segmentation, OCR, and NLP
- Other technical and econometric support, including econometric design
- Open-source project is available on GitHub

EXPERIENCE

Internal Revenue Service

Oct 2023- Present

Research Associate at Research, Applied Analytics, and Statistics Office (RAAS)

Pittsburgh, PA

- Joint research between the IRS and CMU
- Manage large administrative tax data to answer questions in tax policy

Tepper School of Business, Carnegie Mellon University

Aug 2023- Present

Pre-doctoral Research Associate

Pittsburgh, PA

- Utilize big data and ML tools to analyze big administrative tax data for academia
- Analyze government and natural incentives for entrepreneurial entrance

Harvard Business School

May 2022-Jul 2023

Computer Vision Programmer and Research Assistant for HBS Ph.D. Candidate

Cambridge, MA /Provo, UT

- Construct OCR via Python for data collection for Ph.D. dissertation
- Extract, analyze, and visualize data from 25,000+ images and 1,000,000+ data points
- Generalize OCR knowledge for novel applications in academic research

Brigham Young University Record Linking Lab

Jun 2022- Jul 2023

Research Assistant, Computer Vision Team Lead

Provo, UT

- Manage a team of 7 undergraduates and 2 graduate students
- Manage 6+ CV projects for clients including FamilySearch and Wilford Woodruff Papers Foundation

Brigham Young University Economics Department

Sep 2021-Apr 2022

Econ 110 Teaching Assistant

Provo, UT

- Teach lectures on macro and microeconomics for 500+ students
- Host 15 lab hours each week to students and 1-hour lecture review for exam preparation
- Craft test questions and grade all assignments for the instructor

PRESENTATIONS AND CONFERENCES

BYU President's Leadership Council

Sept 2022

Growing Together: Growing the Tree

Provo, UT

- **Topic:** *Emerging applications of computer vision in genealogical research*

Family History Technology Workshop

Feb 2023

City Directories Automated Indexing

Provo, UT

- **Topic:** *My OCR tool as a low-cost method to collect data from city directories*

VOLUNTEER EXPERIENCE

The Church of Jesus Christ of Latter-Day Saints

Sept 2017-Aug 2019

Missionary

Los Angeles, CA

- Responsible for training, morale, and engagement for 70+ fellow missionaries
- Taught religious curriculum to 1500+ Spanish-speaking residents in Orange and Los Angeles Counties
- Taught 15+ English classes to non-native speakers as a free public service

TECHNICAL SKILLS

- | | | | |
|--------------------|--------------------------|---------------------|------------------|
| ▪ Stata | ▪ ML, DL, LLM | ▪ Simplex, Gurobi | ▪ Amazon AWS |
| ▪ Python | ▪ Pytorch, Keras | ▪ Quantum ML, DL | ▪ Google Dev SDK |
| ▪ R, Matlab, Linux | ▪ Web scraping, Selenium | ▪ Quantum Annealing | ▪ Git/GitHub |
| ▪ CSS, HTML | ▪ ArcGIS | ▪ Quantum Gates | ▪ LaTeX |

CERTIFICATES

BYU Spanish Language Certificate

Dec 2022

ACTFL Advanced Spanish Proficiency

Provo, UT

Certificate ID: 6028333-79C11E