Grace Wang
Curriculum Vitae

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EDUCATION

The University of Arizona *2014 - May 2020(exp.)*
Ph.D. in Economics (GPA: 3.9/4.0)
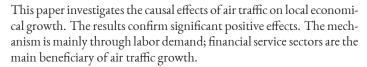
Renmin University of China *2011 - 2014*
M.S. in Economics (GPA: 3.9/4.0)

Southwestern University of Finance and Economics *2007 - 2011*
B.A. in Economics (GPA: 4.0/5.0)

DOCTORAL RESEARCH

"Air Traffic and Urban Growth: Evidence from Airline Networks " (Job Market Paper) 📄

This paper investigates the causal effects of air traffic on local economical growth. The results confirm significant positive effects. The mechanism is mainly through labor demand; financial service sectors are the main beneficiary of air traffic growth.

- Big data manipulation and visualization on airline datasets
- K-means clustering machine learning for hub selection
- Bartik shift-share(1991) as local air traffic instrument

"A More Generalized Way - The Effect of Internal Migration on Local Labor Markets" 📄

This paper investigates the causal effect of internal migration on the local labor market.The results imply that instead of wage reduction, workers have to work longer under the same wage in response to internal migration.

"The Impact of Government Spending in the Healthcare Sector on Labor Market" (Work In Progress)

WORK EXPERIENCE

The University of Arizona 2014 - Present
Sole Instructor, Teaching Assistant 📄

Working cross functionally with operations to make course materials and hold discussions. Course was rated 4.7/5 for effectiveness. TA for 7 different courses. Experience organizing and preparing technical contents. Versatility to communicate clearly with both technical and non-technical audiences.

Grameen Bank 2013
International Program Intern

Evaluating business model and operation; collaborating and identifying new growth and opportunities.

PERSONAL INFORMATION

CITIZENSHIP China, US Permanent Residency (Processing)
LANGUAGE English (Fluent), Mandarin (Native)

COMPUTER SKILLS

Machine Learning and Deep Learning Implementation
Python (Scikit-learn/ Sklearn, TensorFlow, Keras)

Data Querying, Manipulating, Version-control
MySQL/PostgreSQL, REST, RegExr, Git, Unix/Linux

Statistical Analysis, Modeling, Prediction & Optimization
Python (NumPy, SciPy, Pandas), STATA, MATLAB, R, SAS

Data Visualization
Python (matplotlib), R (ggplot2), Spotfire, ArcGIS

Web Scraping and Automated Testing
Python (Selenium, Pandas), DOM, R

Web-application Framework
Django, Flask, WordPress, Hugo, Bootstrap 4, Docker, PHP

PROJECTS AND COURSEWORK

Introduction to Algorithms, MIT OpenCourseWare 🔗
Have strong understanding of algorithms, paradigms, data structures, performance measures and analysis technique.

Machine Learning, Stanford University 🎓Certificate
Implement SVMs for spam classifiers, clustering & PCA to compress images, anomaly detection algorithm for network failing servers, collaborative filtering for movie recommendation.

Neural Networks and Deep Learning 🎓Certificate
Build, train and apply fully connected deep neural networks to classify planar data and classify cat vs. non-cat pictures.

Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization 🎓Certificate
Optimize soccer kicking positions and hiking routes: mini-batch gradient descent, Momentum, RMSprop & Adam, L2 & dropout regularization, batch normalization, gradient checking.

Structuring Machine Learning Projects 🎓Certificate
Diagnose and reduce errors in a ML system; apply end-to-end learning, transfer learning, and multi-task learning.

Convolutional Neural Networks 🎓Certificate
Implement ConvNet and ResNets for object detection in autonomous driving and facial recognition; use the neural style transfer algorithm to generate novel artistic images.

Sequence Models 🎓Certificate
Build and train RNNs, and use GRUs and LSTMs for text generation; apply sequence models to natural language processing (NLP) for text synthesis and audio applications.

Industrial Organization Models; Experimental Economics
Estimate dynamic models of consumer behavior; experience with experimental design and A/B testing.