Cornelia Ilin

Curriculum Vitae updated August 2020

Contact Information

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U.S. Residency Greencard holder

Profile

Data Scientist and Economist (Ph.D.) with 11 years of experience in academia, industry, and consulting. Studied industrial organization and health economics employing a wide variety of **statistical** and **machine learning** methods.

- Extensive experience with causal inference, discrete choice analysis, experiments (A/B testing), record linkage, surveys (design, implementation, and analysis), supervised and unsupervised machine learning algorithms
- Computer languages include Python, Java, R, GIS, SQL, Bash shell; version control with Git(Hub)
- Experience with **big data analytics**: analyzed **terabytes of data** using Hadoop/HDFS and Dask frameworks on CloudLab.us clusters
- Experience with packages such as Pandas, Numpy, Scipy, Statsmodels, Scikit-Learn, TensorFlow2, Geopandas, OSMnx, Rasterio, Matplotlib.
- 2 years of **industry and consulting experience**, including contributions to high-profile litigation cases
- Presented at numerous conferences and wrote papers for journal publications. Mentored 3 Masters' students. Collaborated with faculty, postdocs and graduate students. Taught Object Oriented Programming with Python, Applied Econometrics, and Applied Microeconomics. Currently teaching Applied Machine Learning for the M.S. in Data Science at UC-Berkeley

Education

UW-Madison, Ph.D. in Applied Economics	2012 - 2017
University of Lausanne, Switzerland, M.S. in Economics	2009 - 2011
Academy of Economic Studies of Bucharest, Romania, B.S. in Economics	2004 - 2008

Professional Experience

UC-Berkeley, Data Intensive Development Lab, Postdoctoral Fellow	2020 -
UC-Berkeley, School of Information, Lecturer	2020 -
UW-Madison, Faculty Associate	2018 - 2020
Analysis Group Inc., Menlo Park, CA, Associate Economist	2017 - 2018
DHL European Headquarters, Belgium, Intern Business Analyst	2009

Research Assistant Experience

UW-Madison, Advisor: Guanming Shi, Ph.D.	2012 - 2017
University of Zurich, Switzerland, Advisor: Armin Schmutzler, Ph.D.	2011
EPFL, Switzerland, Advisor: Panos Papadimitratos, Ph.D.	2010

Litigation Consulting

Contributed to several high-profile litigation cases in the healthcare and tech industry: Des Roches, et al. v. Blue Shield and Magellan, Uber v. Google, Apple v. Qualcomm, FTC v. Qualcomm

Journal Publications

under review:
Competition, Price Dispersion and Capacity Constraints: The Case of the U.S. Corn Seed Industry (with G. Shi, 2017).
Methods: causal inference, quantile regressions, instrumental variables, bootstrapping

in preparation:
Human Mobility Data Provides Real-Time Feedback for Managing the COVID-19 Pandemic (with J. Blumenstock, S. Hsiang, X.H.Tai, S. Annan-Phan, S. Mehra, 2020).
Methods: causal inference, predictive analysis, linear regressions

The Role of Birth and Contemporaneous Pollution Exposure on Health Outcomes (with D. Phaneuf, 2019).
Methods: causal inference, record linkage, unsupervised machine learning algorithms (clustering), discrete choice analysis (linear probability and logistic regressions). Data: HIPAA protected

Air Pollution and Cognitive Health. Evidence from Nairobi, Kenya (with E. Tjernstroem, M. FNO, A. Weiner-Kaplow, 2019).
Methods: causal inference, unsupervised machine learning algorithms (dimensionality reduction), linear regressions

Adoption vs. Diffusion. The Evolution of Learning: The Case of the U.S. Soybean Seed Industry (with G. Shi, 2016).
Methods: structural estimation, myopic v. dynamic Bayesian learning models

Manuscripts and Posters

Longitudinal Matching. A Method for Generating Comparable Samples of Treatment and Treatment-Naive Patients with Progressive Conditions (Analysis Group Inc., 2018).
Methods: matching algorithms, Cox hazard models

Effect of Leptin Replacement Therapy on Survival and Disease Progression in Generalized and Partial Lipodystrophy (study funded by Aegerion Pharmaceuticals Inc., 2018).
Methods: Cox hazard models, longitudinal matching. Data: Quasi-experimental

Patient Quality of Life and Benefits of Leptin Replacement Therapy in Generalized and Partial Lipodystrophy (study funded by Aegerion Pharmaceuticals Inc., 2018).
Methods: discrete choice analysis (multinomial logistic and hierarchical Bayesian regressions). Data: surveys (included design, implementation, and analysis)

Teaching Experience

UC-Berkeley:
Lecturer, Applied Machine Learning: Summer 2020, Fall 2020

UW-Madison:
Lecturer, Practicum for Applied Economists: Fall 2019
Lecturer, Object Oriented Programming and Data Analytics with Python: Summer 2019
Lecturer, Quantitative and Applied Economics Seminar: Spring 2019
TA, World Hunger and Malnutrition: Spring 2017
TA, Applied Econometric Analysis I: Fall 2016
TA, Applied Microeconomic Theory: Fall 2014
Lecturer, Math Camp for Incoming M.S. and Ph.D. Students: Summer 2014

Fellowships, Scholarships and Grants

Research Grant, American Bar Association, Section of Antitrust Law, 2016
Ph.D. Summer Program (competitive), Edgeworth Economics, Washington, DC, 2016
Kenneth and Pauline Parsons Graduate Fellowship Fund, UW-Madison, 2016
Vilas Travel Grant, UW-Madison, 2016

Best Paper Presentation Award, AAE UW-Madison, 2016
SASC Graduate Funds, University of Lausanne, 2010 - 2011
Hessen Summer School (competitive), Goethe University of Frankfurt am Main, Germany, 2008
WU Summer School (competitive), Vienna University of Economics and Business, Austria, 2007
Excellency in Research Award, Academy of Economic Studies of Bucharest, Romania, 2007

Seminar and Conference Presentations

Association of Environmental and Resource Economics, 2020
UW-Madison, Healthcare Economics Group seminar, 2019
University of Connecticut, Department of Economics, 2017
European Association for Research in IO (Rising Stars Section), Lisbon, Portugal, 2016
Agricultural and Applied Economic Association Meeting, Boston, Massachusetts, 2016
UW-Madison, Department of Economics, IO seminar, 2016

Professional Activities

Reviewer for the American Public Health Association (APHA), 2019 -
Assistant Program Director, MS in Quantitative and Applied Economics, 2018 - 2020
Social Chair, THC Club of AAE Department, UW-Madison, 2015 - 2016
Seminar Organizer, THC Club of AAE Department, UW-Madison, 2014 - 2015

Language Skills

Romanian (native), English (fluent), French (basic)