

Amit Chaudhary

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A finance professional with expertise in econometrics, computational statistics, and mathematical modeling. Industry experience in finance focused on credit risk management of consumer debt portfolios.

SKILLS

Econometrics	Regression models, time-series/panel data analysis, maximum likelihood methods, VAR
Computational Statistics	Inference, bootstrapping, Monte Carlo simulations, multivariate methods, mixture models
Machine Learning	Shrinkage methods, regularization, model selection, Naive Bayes, decision trees, boosting, clustering, nearest-neighbours methods, random forest, SVM, kernel smoothing, NLP
Mathematical Modeling	Stochastic models, Markov chains, PDEs, optimisation
Causal Inference	A/B testing (experiments), difference-in-differences, regression discontinuity, IVs
Programming	R, Python, SAS. Working knowledge of C++ and Scheme
Data Management	PostgreSQL, SQL scripting, Spark, Redis
Cloud Computing	AWS, parallel programming for HPC clusters
Operating System	UNIX (bash scripting), Windows
Software & Packages	Excel, Stata, ArcGIS, Tableau, L ^A T _E X, Markdown, Word, Powerpoint, ABBYY and Tesseract (Optical Character Recognition)

EDUCATION

University of Warwick

PhD, Economics (fully funded)

2017 – 2021

MRes, Economics (Distinction; fully funded)

2015 – 2017

Delhi School of Economics, New Delhi

M.A., Economics (First division)

2012 – 2014

Indian Institute of Technology, Kanpur

B.Tech, Chemical Engineering

2002 – 2006

RESEARCH EXPERIENCE

University of Warwick

PhD Research

2017 – 2021

- Developed a novel estimation method and an automated tool in R combining machine learning with latent class models and Markov chains that can increase productivity of police department by 10%.
- Web scraped and analysed information from multiple data sources (structured and unstructured) using R and Python across several research projects. e.g. Airbnb listings data, Zoopla's property database, plot level geospatial land records, crime reports, and historical manuscripts.
- Delivered presentations at multiple forums and clearly communicated complex ideas to heterogeneous audience.
- Demonstrated exceptional project management skills by managing multiple research projects simultaneously.

Sessional Tutor

2017 – 2020

- Demonstrated leadership and mentoring skills as a tutor of Advanced econometrics (EC338), Statistical techniques (EC124) and Mathematics (EC121) modules of undergraduate curriculum.

INDUSTRY EXPERIENCE

JP Morgan Chase

Mumbai, India

Credit Risk Strategist

2009 – 2012

- Part of global credit risk management team, responsible for credit risk management of unsecured debt portfolios.
- Evaluated and proposed business strategies that offer best risk-adjusted returns on the portfolio.
- Created substantial business impact by customer acquisition strategy (\$7.1M), credit line management (\$3.6M)

ICICI bank

Mumbai, India

Analyst

2008 – 2009

- Responsible for development, validation, and implementation of econometrics based models for capital adequacy calculations, stress testing, credit scoring, and predicting probability of default.

Ansys

Development Engineer

Pune, India

2006 – 2008

- Integrated the Computational Fluid Dynamics PDE solver with chemical process simulator by coding the Scheme language wrapper around core C++ libraries.

RESEARCH PAPERS

Optimal matching and productivity: Does worker, manager and firm heterogeneity matter?

- Developed a new estimator combining latent class models with a state space based Markov model.
- Estimated model parameters using high performance computing; computational inference is done using Monte Carlo simulations.
- Used Python to webscrape half a million crime reports and converted unstructured data (pdf reports) into structured tables (RDBMS).

Effects of Airbnb on the housing market: Evidence from London.

- Analyzed how entry of Airbnb affects rental housing market prices through supply constraints.
- Combined webcraped Airbnb data with property listings from Zoopla and estimated the model parameters.

Spatial allocation of public goods: The role of caste and politics in India.

- Showed that when politician from a certain caste is elected, he/she allocates public goods to his/her own caste.
- Combined data on 40 million webscraped land records covering 300k sq.km with 10 million geocoded public goods.

Resisting modernisation due to resentment? Evidence from British India

- Showed how foreign occupation can make locals resist modern education using instrumental variable regression.
- Digitized archival data from 1881-1921 using the table recognition and OCR techniques on scanned images.

AWARDS AND ACHIEVEMENTS

University of Warwick PhD Scholarship 2017-2021

Economics Departmental Scholarship (MRes) 2015 - 2017

Visiting Researcher at Warwick Institute for the Science of Cities 2017 - 2021

Conference presentations: LSE (OWL, London 2019); Warwick Postgraduate Colloquium in Computer Science (WPCCS) 2018; Centre for Competitive Advantage in the Global Economics conference, Warwick 2017 and 2019; UN World Cities Day, Warwick 2019

Certifications: Bloomberg Market Concepts (2021)

RESIDENCY STATUS

Indefinite leave to remain (ILR) in the UK