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ARNAV SOOD

overview

I am a first-year economics Ph.D. student at Carnegie Mellon University (Tepper School.) My general interests are in computational macroeconomics, and especially high-dimensional models with heterogeneity in information.

Besides journal articles, my projects include open-source software packages, lectures, and codebases for academic papers.

employment affiliations

University of British Columbia June 2018 — June 2020

Predoctoral Fellow, supervised by Jesse Perla
Guest Lecturer
Member of Centre for Artificial Intelligence Design and Action

QuantEcon January 2019 — Present

Lead Developer
Worked on lecture content, open-source packages, and infrastructure

education

Tepper School of Business, **Carnegie Mellon University**

Ph.D. Economics, August 2021 — Present

University of British Columbia

Economics Courses, June 2018 — June 2020

New York University

B.A. Mathematics, 2018
Minors in Economics, Philosophy

papers

Exploiting Symmetry in High-Dimensional Dynamic Programming NBER WP

Uses permutation invariance and concentration of measure to solve high-dimensional DP problems.
With Mahdi Ebrahimi Kahou, Jesús Fernández-Villaverde, Jesse Perla

software

Expectations.jl Poster from JuliaCon 2020

Provides efficient expectation operators for univariate distributions, using Gaussian quadrature

InstantiateFromURL.jl Talk from JuliaCon 2020

Allows Julia notebooks to refer to online dependency information, boosting reproducibility/mobility

PkgUtils.jl

Various package utilities

other writing

Optimal Stopping and Linear Complementarity with Jesse Perla

Demonstrates how optimal stopping problems can be solved more efficiently as LCPs than as a free-boundary problem

Computational Appendix

Local Perturbation Daily Science Fiction

Applied comparative statics

Customer Feedback (Secondhand Alchemical Goods) Daily Science Fiction

Discussion of various transmutation schemes

Review

Bounded Rationality Blanket Sea

Causes and effects of cognitive constraints

Pushcart Prize nominee

activities

Free Geek Vancouver Volunteer Tech Support

Splash!, Various Universities Volunteer Teacher

Taught free one-hour classes to high-school students

Subjects included information economics, statistics, abstract algebra, philosophy of mind, and Play-Doh

honors awards

William Larimer Mellon Fellowship

National Merit Scholarship Competition (Finalist)