




Compiled July 10, 2021

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## A R N A V S O O D

### overview

I am a first-year economics Ph.D. student at Carnegie Mellon University (Tepper Business 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

#### 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)