Introducing the Econ-ARK: Economics "Algorithmic Repository and toolKit"

Generic Presentation

October 30, 2018

State-of-the-art tools for:

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Solving microeconomic dynamic stochastic optimization problems

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- Simulating populations of agents
 - Whether or not they are solving DSOP
 - · Allows disciplined exploration of deviations from RE
- Finding equilibria for markets/economies populated by such agents

Who Has Produced It?

Name	TLA	Affiliation
Christopher D Carroll	CDC	JHU, CFPB
David C Low	DCL	CFPB
Nathan M Palmer	NMP	OFR
Matthew N White	MNW	UDel, CFPB
Alex Kaufman	ABK	$CFPB \to Princeton$

Nothing herein may be interpreted as reflecing opinions of

CFPB - United States Consumer Financial Protection Bureau

JHU - Johns Hopkins University

IMF - International Monetary Fund

OFR - Office of Financial Research, U.S. Treasury

UDel - University of Delaware

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Who, What, Why Who October 30, 2018

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Three Years

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• Hire Programmers, RA's, Open Source Project Managers, etc etc

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- Structural Micro Models (e.g., labor, health)
- 10 models with equilibrim between consumer agents and firm agents
 - Unlike Noah's, our ARK can hold more than two of each kind!
 - Ultimate goal: Get examples on the ARK of all types of animal (model)

Who, What, Why What October 30, 2018

- **1** Micro Structural Modeling $2017 \approx \text{Econometrics circa } 1970$
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 - Papers that could benefit from including theory do not do it

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Remove the excuse 'Structural model was not worth the effort'

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Policymaking = Applied Theory. Options:

- Informal, intuitive, "wetware" theory
- Formal, structural, "software" theory

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Alchemy → Chemistry

How: The Invention of Science by David Wootton

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17th and 18th century version of github.com!

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Browse without installing:

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