

W. Michael Wooley

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EDUCATION

Northwestern University, Evanston, IL

M.A. in Economics, 2014-2017

University of Pittsburgh, Pittsburgh, PA

B.A. in Philosophy (Summa Cum Laude), 2014

B.S. in Mathematics-Economics (Summa Cum Laude), 2014

TECHNICAL SKILLS

Python (esp. TensorFlow, theano [RIP], NumPy, SciPy, pandas), JavaScript (esp. D3.js, React, Redux, Electron), R, Matlab, Julia, Fortran, Stata, SQL, L^AT_EX, ØMQ, Adobe InDesign.

RECENT AND ONGOING PROJECTS[†]

yapij 2018

A lightweight python interpreter for Electron apps.

- A single-process, multi-thread application that requires substantially less memory to run than Jupyter-Lab (20-40MB of ram compared to >100MB over several processes).
- Built-in magics to organize workspaces, handling of common python types (e.g. pandas dataframes) for easy use in node environment, ping-pong heartbeats.
- Besides node and python: Communication with ØMQ, packing with MessagePack.

Understanding Busines Expectations (demo site) 2018

Framework for eliciting subjective probability distributions in a survey context.

- Provides new tool to ask questions regarding expectations/beliefs à la Manski [2005].
- Converts user drawing of curve into proper (but exact) piecewise-linear distribution. Realtime computation of summary statistics means that users know what their edits imply for, e.g., percentiles, mean, variance, etc.
- Set of questions to be explored in this context is large. The proposal section of the demo site discusses a few possible applications.
- Main tools: react, D3.js, redux, react-router.

GT Macro Modeling Framework 2018

Desktop app for modeling, forecasting, and viewing macroeconomic data.

- Intuitive UI for use by non-programmers: model, variable, and data management; visualization of data, forecast diagnostics, forecasts.
- Numerical work (BVAR+Dynamic Factor Models, hierarchical hyperparameter selection, conditional forecasts) in python then connected to electron app via yapij (see above).
- Main tools: electron, react, python (NumPy, Numba, pandas).

WORK EXPERIENCE

Grant Thornton, Chicago, IL

Jan. 2018-*present*

Senior Economist

- One-man team on several long-term projects at the intersection of economics and programming. For more information, see the projects section above.
- Compose analyses of recent data releases (particularly home sales) for quick distribution to GT employees and clients. Focus on longer-term trends, anomalies, and how the new data affects our outlook on the larger macroeconomic situation.
- Carry out ad hoc research as needed. Recent example is analysis of downstream effects of steel and aluminum tariffs (see [this link](#) for interactive maps).
- Aid in standing up economics group at Grant Thornton: addition of economics blog to website, setting up emailing platform, coordination of workflows for distributing research to internal and external clients.

Diane Swonk Economics, Chicago, IL Jun. 2017-*present*
Economic Consultant

→ Part-time consulting work that became full-time when DS Economics was absorbed by Grant Thornton in January 2018. Please see above for description of work.

Cloverleaf.me, Cincinnati, OH Jun. 2017-Nov. 2018
Consultant

→ Developed research on team interactions using GitHub repository data.
→ Shoveled and analyzed data using Python (Pandas, pymongo).
→ Analyzed “core” development teams, performance, and interactions using clustering, decomposition, and regression.

Northwestern University, Evanston, IL 2015-2017

Graduate Research Assistant, Department of Economics, 2016

Graduate Teaching Assistant, Department of Economics, 2015-2017

→ Collected, evaluated, and documented data on traded and non-traded commodity prices and quantities.
→ Aided in data preparation process: harmonizing time series, documenting code, debugging.
→ Taught weekly sections of 10-40 students in five different courses.
→ Graded various assignments and tests. In cases where writing is involved, focused on argument development, effective use of statistics, and exposition of economic intuition.

SELECTED RESEARCH

- (1) “Fiscal Centralization: Theory and Evidence from the Great Depression”. *American Economic Journal: Economic Policy*, May 2018. (with Daniele Coen-Pirani)
- (2) “Labor Market Consequences of Graduating During a Recession: The Case of the Termites”, 2017.
- (3) “Monetary Policy in an Economy with Production Networks”, 2017. (Northwestern Macro Lunch)
- (4) “State-Local Centralization During the Great Depression: A Case Study of Ohio”, 2013.
- (5) “Pitt and the Worker Rights Consortium: An Argument for Affiliation”, 2013. (On behalf of Pitt #NoSweat Coalition Against Sweatshop Labor)

(Shorter blog posts, links to research, and replication files can be found at michaelwooley.github.io.)

FELLOWSHIPS AND AWARDS

University Fellow, Northwestern University	2014-2015
Jerome C. Wells Award, Department of Economics, University of Pittsburgh	2014
University Scholar, University of Pittsburgh	2013, 2014
First Prize, Ossip Awards for Excellence in Undergraduate Writing, University of Pittsburgh	2013
Chancellor’s Undergraduate Research Fellowship, University of Pittsburgh	Spring 2013
Marion McKay Prize, Department of Economics, University of Pittsburgh	2012
Brackenridge Undergraduate Research Fellowship, University Honors College	2012
University Honors College Tuition Scholarship, University of Pittsburgh	2010-2014

† All of these projects are part of my work at Grant Thornton. Therefore, I cannot make my repos public at this time. However, I would be happy to discuss the structure and challenges of each project on a one-on-one basis.

Last updated: October 15, 2018