

# WESLEY JANSON

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## EDUCATION

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<b>University of Chicago</b>	June 2023
M.S., Computational Analysis and Public Policy	
<b>University of Minnesota-Twin Cities</b>	May 2018
B.A., Economics	

## TECHNICAL SKILLS

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<b>Computer Languages</b>	R ( <i>rshiny</i> , <i>tidyverse</i> , <i>nnet</i> ), Python ( <i>pandas</i> , <i>sklearn</i> , <i>PySpark</i> ), Stata, SQL
<b>Software &amp; Tools</b>	L <sup>A</sup> T <sub>E</sub> X, Git/Github, Microsoft Office Suite, Amazon Web Services

## PROFESSIONAL EXPERIENCE

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<b>Internal Revenue Service, U.S. Department of the Treasury</b>	July 2023 – Present
<i>Data Scientist</i>	

- Collaborate with IRS divisions and researchers to identify and resolve data challenges, leveraging statistical modeling and data engineering techniques to develop solutions that support tax policy analysis and operational decision-making
- Develop and maintain the Enterprise Planning Scenario Tools, a suite of RShiny dashboards within the Automated Analytics Lab of the Office of Research, Applied Analytics, and Statistics, enabling internal stakeholders to optimize workforce allocation for approximately 8,000 employees, representing a budget of around \$400 million
- Design and conduct a randomized controlled trial involving 120,000 taxpayers to improve outreach effectiveness and enhance revenue estimation for efficient tax administration

<b>University of Chicago, Harris School of Public Policy</b>	July 2023 – Present
<i>Affiliated Researcher</i>	

- Conduct original research in municipal finance applying modern portfolio theory to explore risk asymmetry and service-driven revenue structures
- Develop a corresponding R package to be featured in the CRAN repository that generates optimal portfolios and efficient frontiers, with wide-ranging applications from municipal finance to equities and renewable energy markets

<i>Technical Assistant, Professor Justin Marlowe</i>	May 2022 – July 2023
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- Overhauled the Harris School's [Center for Municipal Finance website](#), integrating event updates, media coverage, research, and data, including launching the "CMF Data Dashboard" to provide interactive visualizations on municipal bond trading, pricing, and liquidity
- Using a repeat-sales regression methodology, created a municipal bond index gauging 50 individual city/county/school district financial health and market sentiment, featured in Bloomberg News and [Crain's Chicago Business](#), and found on the CMF Data Dashboard

<b>Securities Quote Xchange (SQX)</b>	May 2022 – July 2023
<i>Data Science Consultant</i>	

- Provided research support for SQX – a financial services firm specializing in alternative trading systems for fixed income securities – deploying data mining project management to use econometric and machine learning modeling using R, Python, and SQL to enhance products for clients
- Developed, trained, and iterated a data-driven approach to grouping peer bonds in SQX's municipal bond pricing model – used by traders, analysts, and regulators – creating time-consistent groupings, and shortening run-time by 90%

- Implemented an internal credit ratings system using a gradient-boosted tree machine learning algorithm, which assigns ratings to approximately 500,000 otherwise unrated municipal bonds

### **Federal Reserve Bank of Cleveland**

September 2018 – August 2021

*Research Analyst*

- Advanced six original research for public release and academic journal submission by gathering and preprocessing relevant data, performing econometric analysis using R and Stata, and writing up findings
- Enhanced preparation to the monetary policy-making process by supporting bank economists with briefings on financial and macroeconomic conditions ahead of the bi-quarterly Federal Open Market Committee meetings by automating data collection, creating data visualizations and other research material
- Automated the [Simple Monetary Policy Rules](#) bank product using Matlab, eliminating manual data entry and potential user error, ensuring the quarterly updates to the underlying information provided to the public is accurate
- Coauthored 3 short, [policy-relevant articles](#) aimed for public viewing, and 2 academic working papers, one currently under review at an academic journal, one published in the *Journal of Money, Credit and Banking*

### **Federal Reserve Bank of Philadelphia**

June 2018 – August 2018

*Model Development Intern, Risk Analytics & Surveillance*

- Developed a new forecasting model for use by FRBP officials on cash deposits and orders from third district member banks by utilizing time series econometric techniques in the SAS programming language

### **University of Minnesota, Heller-Hurwicz Economics Institute**

December 2017 – May 2018

*Undergraduate Research Assistant, Senior Fellow Kurt Winkelmann*

- Provided research support on project using economic theory, econometrics, and data to inform upon the construction of optimal pension plans with a specific focus on public plans
- Orchestrated the constructing and testing of economic and financial models used to inform upon optimal public pension policy and employee savings decisions
- Coauthored “Risk-taking by Public Pension Funds”, a policy brief appearing on the HHEI website

## **SELECTED PUBLICATIONS**

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“[Portfolio Theory and Municipal Revenue: Service Structures and Risk Asymmetry](#)” (*In Progress*, with Nathan Grasse, Justin Marlowe, and Elizabeth Searing)

“[Diversification and Stability in Illinois Local Government Revenues](#)” (2023, with Justin Marlowe) *Illinois Municipal Policy Journal*, 8(1), 61-80.

“[Out of Bounds: Do SPF Respondents Have Anchored Inflation Expectations?](#)” (2023, with Carola Conces Binder and Randal J. Verbrugge) *Journal of Money, Credit and Banking*, 55(2-3), 559-576.

[Forward Guidance during the Pandemic: Has It Changed the Public’s Expectations?](#) With Chengcheng Jia. *Federal Reserve Bank of Cleveland Economic Commentary*, Number 2020-27. December 2020.

[The Information Effect of Monetary Policy: Self-Defeating or Optimal?](#) With Chengcheng Jia. *Federal Reserve Bank of Cleveland Economic Commentary*, Number 2020-15. July 2020.

[The CPI-PCEPI Inflation Differential: Causes and Prospects.](#) With Carola Conces Binder and Randal J. Verbrugge. *Federal Reserve Bank of Cleveland Economic Commentary*, Number 2020-06. March 2020.

[Risk-taking by Public Pension Funds.](#) With Kurt Winkelmann, Jordan Pandolfo, and Matthew Murphy. *Heller-Hurwicz Economics Institute Policy Brief*, December 2018.