THE WOLFRAM SOLUTION FOR ECONOMICS

“...One of the biggest advantages that I’ve derived from switching to Wolfram technologies is the ability to operate in a vector sense or on a set rather than having to loop through everything. That’s going to be a relative breakthrough in terms of my ability to now answer questions in a matter of minutes as opposed to . . . hours or days.”

—Joel Drouillard
Research Analyst
BondDesk Group LLC
Easily create interactive applications that pull in your data or ours, perform standardized or custom analysis, and automatically generate reports that can be deployed in the cloud and through APIs—all in one system, with one integrated workflow.

The Wolfram economics solution includes sophisticated statistics and optimization tools alongside unique capabilities like built-in data sources, semantic data representation, dynamic interactivity, advanced differential equation solving, and the reliability of a mixed symbolic-numeric approach to computation.

**THE WOLFRAM EDGE**

- Automatically preprocess data, including missing-values imputation, normalization, and feature selection
- Semantically import data using freeform linguistics to interpret elements in the file structure
- Instantly create interactive applications to study economic behavior
- Run fast, efficient, large-scale simulations for cash flow testing and other applications
- Generate computational agent-based models of dynamic economic systems
- Detect and visualize chaotic behavior in macroeconomic time series data
- Solve microeconomic dynamic stochastic optimization problems
- Use differential algebraic equations modeling for the study of the economic efficiency indexes and more
- Perform survival and reliability analysis with built-in functionality
- Create, schedule, and share interactive reports in the cloud automatically

**KEY CAPABILITIES**

- Built-in linear, nonlinear, logit, probit, generalized linear, and other regression models
- Estimation of distribution parameters from data and testing of goodness of fit of data to distributions
- Easy import and export of data in a wide variety of formats, including XML, XLS, CSV, and TSV
- Broad support for censored and truncated data, optimized parametric and nonparametric survival modeling frameworks, and a range of generalized hypothesis-testing functions
- Freeform linguistic input produces immediate results without the need for syntax
- Built-in machine learning capabilities for working with many types of data for applications in behavioral economics, Big Data, and more
- Powerful local and global optimization, both numeric and symbolic, including constrained, nonlinear optimization
- Systemwide support for random processes, including parametric processes, hidden Markov processes, queueing processes, time series, and stochastic differential equation processes
- Automatic generation of reports with interactive applications and text, immediately deployable using Wolfram CDF Player, webMathematica, or the Wolfram Cloud
- Access terabytes of curated data from the Wolfram Knowledgebase—including geographic, socioeconomic, and demographic information—immediately ready for analysis
- Integrate R code into workflow, combining Wolfram’s broad range of capabilities with the statistical computing language
“This symbolic capability of Wolfram technologies allows you to play with data in a way that no other software would.”

– Ariel Sepulveda
Founder
Pronto Analytics

“it’s a very effective, compelling visualization tool, and it’s open; that is, when someone asks me a question at a presentation, I can actually modify the code on the fly to take account of their new assumption, rerun the model, and present it . . . they find it a useful tool for thinking about the problem.”

– Seth Chandler
Professor of Law
University of Houston

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Easily building interactive applications to analyze economic models

Building advanced mathematical models for shaping economic policy

Creating multidimensional visualizations of production, sales, and unemployment data

FOR MORE INFORMATION
> www.wolfram.com/economics
ORGANIZATIONS USING WOLFRAM TECHNOLOGY

Many of the world’s top companies and organizations rely on Wolfram products to maintain their competitive edge, including 100% of the Fortune 50 companies. Here are just a few:

- Board of Governors of the Federal Reserve System
- Allstate Insurance
- Allianz Insurance
- Bank of America
- Citigroup
- Goldman Sachs
- Morgan Stanley

GET THE WOLFRAM EDGE

Visit our economics page for a free trial and explore how Wolfram technologies can further advance your work.

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