

Nathan Burton

Denver, CO

insanityunhinged.com

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435 232 4028

Former PhD student with a passion for solving problems with data, math, and context

Skills Python, R, SQL, SAS, C++, Stata, machine learning, TensorFlow, sklearn, pandas, information theory, time series, nonparametric statistics, economics, finance, mathematical models, stochastic models, Linux/Unix, bash, remote/cloud computing, data analysis, big data, AWS, Colab

Analyst/Research Experience

Quantitative Analyst/Data Scientist,

April 2021 - present

Independent Consultant

Sample Projects:

- Replicated factor model hedge portfolio study
- Created comparison for ML stock prediction models, and conditional error distribution estimation (Python, TensorFlow, sklearn)
- Created oscillation prediction for cryptocurrency inter-exchange spread (Python)
- Investigated Hasbrouck information share between cryptocurrency markets (Python)

Quantitative Analyst,

November 2020 - March 2021

Alpine Peak Holdings

- Developed, presented, discussed investment strategies
- Coded investment strategies (Python)
- Created entire algo investment application from scratch (Python - Colab, AWS)
- Backtested (from high frequency data) and simulation of strategies (Python)
- Ran and monitored live and paper trading (Python - Colab)

Researcher,

August 2014 - June 2021

Indiana University, Utah State University

- Wrote/modify code from academic theoretical papers (Python, R)
- Develop theoretical concepts and models for stock behavior with simulation comparison
- Completed various time series statistics projects and papers (Python, R)
- Coded online text retrieval for textual analysis (Python)
- Compiled/modified big financial data for analysis (SAS, Python)

Business Intelligence Intern,

April 2014 - August 2014

New Dawn Technologies (Journal Technologies)

- Wrote queries for auto-filling court documents (MS SQL)
- Managed on-site database copies for testing
- Interacted with and determined needs of customers

Random Info

- Eagle Scout
- Outdoor enthusiast (mountaineering, mountain biking, trail running, skiing, etc.)

Education

MA Mathematics, May 2021

Indiana University Bloomington

Emphasis: Applied mathematics, Probability, Systems, Financial mathematics

Master's in Finance, September 2019

Kelley School of Business, Indiana University Bloomington

en route to PhD (left PhD program), Statistics minor
Emphasis: Statistics, Market microstructure, Econometrics

MS Economics/MS Financial Economics, August 2017

Huntsman School of Business, Utah State University

Emphasis: Econometrics, Market microstructure

BA History/BS Political Science, December 2012

Utah State University

Teaching Experience

Associate Instructor, August 2017 - May 2021

Finance, Mathematics

Indiana University Bloomington

Substitute Instructor/TA, August 2014 - December 2016

Finance, Economics

Huntsman School of Business, Utah State University

High School Teacher, August 2013 - March 2014

Chemistry

Kofa High School, Yuma Union High School District

Instructor/Tutor, January 2013 - May 2013

Math, ACT

Sylvan Learning

Volunteer Experience

Congregation Financial Clerk, December 2017 - July 2021

Church of Jesus Christ of Latter-day Saints

Varsity Scout Coach, August 2014 - June 2017

Boy Scouts of America

Charity Fundraising Volunteer, April 2014 - August 2014

Bike with Brent, CETC