Taylor R. Brown

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Education

Ph.D. Statistics, The University of Virginia, 2018.

M.S. Statistics, The University of Connecticut, 2013.

B.A. Mathematics & Economics, The University of Connecticut, 2010.

Employment

Assistant Professor of Statistics, General Faculty, Department of Statistics, University of Virginia 2021–.

Lecturer of Statistics, Department of Statistics, University of Virginia 2018-2021.

Articles and Papers

A Case-Study of Sample-Based Bayesian Forecasting Algorithms, 2022.
arXiv:2208.02968 [stat.AP]

The Most Difference in Means: A Statistic for Null and Near-Zero Results, 2022.
arXiv:2201.01239 [stat.ME]

A Short Introduction to PF: A c++ Library for Particle Filtering, 2020.
The Journal of Open Source Software

Approximating Posterior Predictive Distributions by Averaging Output From Many Particle Filters, 2020.
arXiv:2006.15396 [stat.ME]

PF: A C++ Library for Fast Particle Filtering, 2020.
arXiv:2001.10451 [stat.CO]

A Pseudo-Marginal Metropolis-Hastings Algorithm for Estimating Generalized Linear Models in the Presence of Missing Data, 2019.
arXiv:1907.09090 [stat.ME]

A Markov-Switching Factor Stochastic Volatility Model, 2018.
arXiv:1903.01841v1 [stat.AP]

Brown, Taylor. *Factor Stochastic Volatility Models for Portfolio Construction.* University of Virginia, Department of Statistics, PHD (Doctor of Philosophy), 2018, https://doi.org/10.18130/V3ZW18R9V

Books

An Introduction to R and Python For Data Analysis: A Side By Side Approach, 2021
CRC Press Taylor & Francis Group

Public Software

`pf`: a C++ library for fast particle filtering.
https://github.com/tbrown122387/pf

`pfR`: Interface to the C++ Library pf
https://cran.r-project.org/web/packages/pfr/index.html

`gradeR`: helps grade R script assignment submissions!
https://cran.r-project.org/web/packages/gradeR/index.html

`cPseudoMaRg`: Constructs a Correlated Pseudo-Marginal Sampler
https://cran.r-project.org/web/packages/cPseudoMaRg/index.html

`ssme`: a c++ static library for state space model forecasting and estimation.
https://github.com/tbrown122387/ssme

Teaching

University of Virginia

STAT 8120: Topics in Statistics (particle filtering)

STAT 7510: Advanced Topics in Statistical Inference

STAT 7200: Introduction to Advanced Probability

STAT 6440: Introduction to Bayesian Methods

DS 6040: Bayesian Machine Learning

STAT 6021: Linear Models for Data Science

STAT 5430: Statistical Computing with SAS/Python and R

STAT 5170: Applied Time Series

STAT 4170: Financial Time Series and Forecasting

STAT 4160: Experimental Design

STAT 3250: Data Analysis With Python

STAT 3120: Introduction to Mathematical Statistics

STAT 2120: Introduction to Statistical Analysis

STAT 1602: Introduction to Data Science with Python

STAT 1601: Introduction to Data Science with Python

University of Connecticut

    STAT 1000 Introduction to Statistics

Departmental Service

University of Virginia

    Tianyuan Zhou's PhD Committee (2022-2023)

    Lecturer Hiring Committee (Summer 2022)

    Undergraduate Committee (Fall 2021-Present)

    Graduate Committee (Fall 2020-Present)

    Undergraduate Major Advisor (Fall 2021-Present)

    Computer Skills Confirmation Test (formerly the Computer Language Exam) (2018-Present)

Honors and awards

    2021: Learning Technology Incubator Grant

    2016: Summer Fellowship U.Va. Department of Statistics

    2015: Summer Fellowship U.Va. Department of Statistics

    2014: Summer Fellowship U.Va. Department of Statistics

    2014: U.Va. Jefferson Trust Big Data Fellowship pre-proposal award

    2014: U.Va. Graduate Statistics Seminar Committee Co-Chair

    2013: UConn Ross D. MacKinnon Graduate Fellowship

Memberships

    American Statistical Association