James Otto –

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Education

- **Baylor University** — Waco, TX
  Ph.D. in Statistics; GPA: 3.98 — *(Expected) Aug 2019 – May 2023*
  MSc in Statistics; GPA: 4.00 — *Aug 2019 – Dec 2020*
  BBA in Economics, Management of Information Systems, Statistics, and Mathematics; GPA: 3.87 — *Aug 2015 – May 2019*

Work Experience

- **Baylor University** — Waco, TX
  Doctoral Candidate — *December 2021 – Present*
    - **Eli Lilly**: Collaborated with statisticians at Eli Lilly working on Bayesian models for clinical applications.
    - **Course Materials**: Developed Stan and JAGS model code and accompanying visualizations for examples in course materials used in introductory Bayes course for statisticians at Eli Lilly.
  Graduate Student — *Aug 2019 – December 2021*
    - **Relevant Coursework**: Deep Learning, Machine Learning, Modern Trends in Data Science Computing, Computational Statistics, Spatial Analysis, Linear Models, Time Series, Bayesian Theory, Bayesian Methods, Large Sample Theory, Categorical Data Analysis, Measure Theory, Topology
- **Globe Life Insurance** — McKinney, TX
  Advanced Data Analyst — *May 2019 – Present*
    - **Modeling**: Worked on several projects using statistical models and methods to solve various business problems. Implemented solutions as R packages with thorough documentation for use in production.
    - **Documentation**: Maintained wiki on the R ecosystem, available internal and external resources, and best practices. Also led workshops on packages, data visualization, and modeling basics.
    - **Mentoring**: Mentored intern who was eventually hired as a FT employee. Assisted in teaching visualization and modeling best-practices; provided guidance on how to best present information to executive-level management.
  Data Analyst (Part-Time) — *Aug 2018 – May 2019*
  Data Analyst (Intern) — *Jun 2018 – Aug 2018*

Projects

- **ggdensity**: R package extending ggplot2 providing interpretable visualizations of bivariate density estimates.
- **TDAvis**: R package extending ggplot2 implementing the visualization of tools from Topological Data Analysis.
- **tldr**, **tldrDocs**: R packages implementing short-form documentation in the console. Includes documentation for common base R functions and roxygen2 extensions for the creation of documentation files by other package developers.
- **Lapse Prediction**: Modeled customers' probability of lapsing to allow for preemptive outreach. After success of A/B testing, implemented model for entire customer base yielding an estimated additional $8.4 million in annual premiums. Organized code and documentation for model training and data modeling process in internal R package.
- **Compensation Rework**: Developed and proposed systems of compensation for customer service representatives in several departments. Created Shiny apps for visualizing and quantifying costs associated with system parameters, used alongside executive management to determine details of pay scales.
- **Personal Server**: Installed, configured, and now maintain software on personal Linux machine serving RStudio Server, Gitea, and other services through the use of Docker and Caddy. Also maintain AWS EC2 and Lightsail instances serving RStudio Server and Shiny Server. Used for coursework, package development, research, and personal projects.

Computational Skills

- **Extensive Experience**: R, R package development, ggplot2, Shiny, Quarto/R Markdown, knitr, LaTeX
- **Moderate Experience**: TensorFlow, Docker, AWS (EC2, Lightsail), JAGS, Stan
- **Some Experience**: Python, SQL
- **Tools I Love**: reticulate, RStudio Server, Git, Vim

Selected Publications And Presentations

J. Otto and D. Kahle. **ggdensity**: Improved Bivariate Density Visualization in R. *Joint Statistical Meetings*, August 7, 2022. Slides available here

P. Hagelstein, I. Lackner, J. Otto, A. Perona, and R. Piziak. Fixed and Dynamic Asset Allocation in the Accumulation Phase. *Journal of Finance and Investment Analysis*, 8(1):1–12, 2019