Eric Ekholm

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I am a data scientist with over 5 years of experience using data to improve educational practice and decision making. I have hands-on experience in research design, machine learning, software engineering, and cloud computing. I am particularly passionate about communicating the results of my work in accessible language and intuitive visualizations.

Work Experience

Data Specialist **2021-Present**
Chesterfield County Public Schools, Midlothian, VA

- Built dashboards displaying student assessment performance accessed by hundreds of users, using R, Shiny, Docker, and Google Cloud.
- Evaluated the return on investment of over $5 million in new and existing programs using quantitative and qualitative methods.
- Developed and maintained several internal R packages used by the entire Research and Evaluation team.
- Developed and maintained ETL pipelines for integrating data from vendors into internal databases, using R, Go, and SQLServer.
- Fit an early warning model predicting student chronic absenteeism using R and the tidymodels framework. Educated division leaders on appropriate use of this model.
- Created and maintained an internal website containing all reports written by the Research and Evaluation team, using Quarto, Python, and Google Cloud.
- Led the migration of analytics tools from locally-hosted tools to Google Cloud tools, improving team efficiency.

Associate Director, Early Childhood Data **2019-2021**
Virginia Department of Education, Richmond, VA

- Oversaw the development of LinkB5, a data portal used by thousands of early childhood programs across Virginia.
- Led data sharing and research efforts with external partners, including public and private organizations.
- Created hundreds of individualized early childhood reports and visuals for state legislators, using R and Rmarkdown.
- Combined data from public and internal sources to develop a model estimating the proportion of eligible children served by Virginia's early childhood programs. This model was used as part of a successful effort to appropriate millions in additional funding for early childhood programs.

Graduate Research Assistant **2016-2019**
Virginia Commonwealth University School of Education, Richmond, VA

- Published 11 peer-reviewed articles on a variety of topics in education and quantitative methodology.
- Led statistical modeling and data management for the Motivation in Context lab.

Education

Ph.D, Educational Psychology **2016-2019**
Virginia Commonwealth University, Richmond, VA

M.T., Education **2011-2012**
Virginia Commonwealth University, Richmond, VA

B.A., English **2006-2010**
Virginia Tech, Blacksburg, VA

Technologies and Languages

Languages: R, SQL, Go, Julia, Python, Bash
Technologies: Git, Quarto, Postgres, SQLServer, NoSQL, Google Cloud Platform, Docker
Other: Machine learning, Causal inference, Statistics, Data visualization, Research design, Data structures and algorithms

Projects

Flex Creek: Workout tracking and recommendation application in Go. Concepts include REST API design, NoSQL database (Firestore), and JWT authentication. See the source on Github.
Saul: AI-powered lesson plan generator written in Go. Concepts include integration with the OpenAI API, REST API design, and front-end templating. See the source on Github
Leakybrain: A technical notes site containing notes on statistics and data science workflows, among other things.