

Thomas Curran

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San Mateo, CA

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Professional Experience

Data Scientist, Education

December 2018 - Present

Chan Zuckerberg Initiative (CZI) - Redwood City, CA

- Extract, transform and analyze large volumes of user data to provide actionable insights and recommendations for external and internal stakeholders to understand organization's users and optimize products.
- Developed a novel algorithm and framework for improving user sampling for concurrent experiments at scale. Framework and algorithm successfully reduced oversampling and bias for experiments throughout the organization.
- Use analytical frameworks and exploratory data analysis techniques to lead development of and define product's key performance indicators aimed at improving user experience and positively impacting student outcomes.
- Use rigorous experimental methods and statistical models to understand the impact of the product on student outcomes and engagement
- Drive adoption and implementation of data-driven decision making processes across the organization and its internal stakeholders. Adoption of new processes directly affected collaboration efforts between internal and external stakeholders, reduced data and metric redundancy and improved overall product decision making process through the use of data
- Implement ETL pipelines with airflow to store and record critical operational metrics and key performance indicators.

Data Scientist

June 2015 - December 2018

Oklahoma Public School Resource Center (OPSRC) - Oklahoma City, OK

- Created statistical models using regression and experimental design tools to evaluate current and proposed education policies; several analyses and evaluations were cited by state legislators, the Associated Press and the Tulsa World.
- Led development of SQL database to store, manage and retrieve education data; development of database significantly increased timeliness and scope of reports and analysis; analysis served as data source for econometric models and financial analysis, and developed key performance metrics for internal and external stakeholders.
- Wrote and implemented code in python and R to wrangle, clean and validate structured and unstructured data; automation of the data cleaning process increased access and timeliness of data for other departments and projects.
- Partnered with internal stakeholders and external partners to develop data products and solutions, such as school facing dashboards and automated reports that allow schools to make data driven decisions for optimal impact for students.

Research Assistant

June 2017 - June 2018

National Opinion Research Center (NORC), Center for Excellence in Survey Research - Chicago, IL

- Conducted geo-spatial analysis of early childhood care and education facilities in northwest Arkansas that directly impacted the sampling strategies of survey projects, including large multi-state surveys.

Teaching Assistant

September 2017 - June 2018

University of Chicago, Harris School of Public Policy

- Served as a Teaching Assistant to Professor Jens Ludwig's Crime Policy class in the spring of 2018.
- R tutor for graduate students

Teacher, Corps Member

May 2013 - June 2015

Teach For America

- Taught eighth grade science at Roosevelt Middle School in Oklahoma City Public Schools.

Technical Skills

- **Computing Languages:** Python, R, SQL, Scala
- **Machine Learning:** Regression Modeling, KNN, Neural Networks, Support Vector Machines, Natural Language Processing
- **Statistics:** Hypothesis Testing, Statistical modeling, MLE, A/B Testing
- **Data Visualization Tools:** Plotly, Shiny (R), Dash, Tableau, Periscope, Mode

Education

The University of Chicago, Irving B. Harris School of Public Policy Chicago, IL (2016-2018)

Master of Public Policy (MPP), with Graduate Certificates in Survey Research Methodology, Computational Social Science

- **Selected Writings:** *Using Neural Networks and Support Vector Machines to Predict School Performance in Oklahoma (2018)*
- **Becker Friedman Institute for Economics at The University of Chicago:** *Open Source Macroeconomics Laboratory Bootcamp*

Stonehill College Easton, MA (2007 - 2011)

Bachelor of Arts, English Literature

