Keith Richard Araneo-Yowell, MSTAT

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# EDUCATION

## Master of Statistics - Econometrics *- University of Utah*

August 2012 - Dec 2016

## Bachelor of Science - Economics *- University of Utah*

August 2004 - August 2011

## Bachelor of Arts - Journalism *- University of Utah*

August 2004 - May 2011

**TECHNICAL EXPERIENCE**

## Project Manager

TLS Cure8, LLC

Salt Lake City, Utah

June 2021 - Present

* Defined the software platform
* Guiding the application’s design, and road-mapped features to be added in the future such as a home landing page.
* Managed a team of developers to meet project goals
* Met with stakeholders - including customers, business managers, and the development team to make sure goals were clear and the vision aligned with business objectives.
* Expanded Cure8's network of product testers during product development through word-of-mouth interactions
* implemented the product roadmap, built the team and delivered the product
* Understanding the needs of stakeholders and pain points in their production processes and designing around these challenges to produce an efficient and intuitive software product was crucial to the product’s success

## Software/Methods Consultant and Data Warehousing Manager

Times Life Science Consulting, LLC

Salt Lake City, Utah

September 2019 - Present

* Working in the pre-clinical process development, this role requires clear communication skills to coordinate the efforts of global teams consisting of software developers, bench scientists, and business stakeholders.
* Managed data migration of client records into client-owned AWS server, which required utilizing amazon’s AWS’s OCR workflow to read in hand-written documents
* Provided analytical support for clients drafting reports and creating dashboards in the JMP software environment. These reports were for process validation, accountability, and analytical needs for the company moving forward while still being scalable for future growth.
* Created visuals in R’s ggplot2 package to illustrate statistical findings of simulated animal models
* Simulated client’s Parkinson’s Disease animal model study design and response variable distributions to run a power analysis of statistical tests in preparation for a first-in-man drug safety trial
* Listed statistical shortcomings resulting from flawed study design and experimental protocols the client had followed in preliminary steps.
* Presented findings that led the client to restructure and implement improved experimental and data-collection protocols.
* Reviewed preclinical drug safety study plans and advised on a statistical analysis of data in preparation for FDA review.
* Developing drug manufacturing analytics for the client before GMP campaign

## Mathematics Tutor

## Salt Lake Community College STEM Learning Resources

## Salt Lake City, Utah

## May 2019 - December 2019

## Coached students on conceptualizing statistical problems

## Facilitated instruction using different delivery methods

## Encouraged anxious or frustrated students to work through gaps in their understanding and taught them *how* to learn a subject as obscure as statistics

## Statistical Researcher for STEM

Department of Data Science and Analytics, Salt Lake Community College

Salt Lake City, Utah

January 2017 - September 2019

* Used extreme gradient descent to predict biology course success
* Coded data-gathering loop using ‘rcanvas’ functions to pull student test scores from Instructure’s servers
* Drafted R Markdown documents for research reports and presentations
* Created PCA/feature selection protocol for automating robust propensity-score-matched sample selection
* Designed and built online dashboards in R Shiny, which the math department now uses to schedule companion courses and workshops for their classes on different campuses
* Ran difference in differences regression to measure the value of concurrent enrollment
* Employed Bayesian structural time series model to measure the effects of various interventions in the Biology and Math Departments
* Wrote several educator-ranking and center-utilization functions into an R Shiny dashboard for SLCC’s tutoring labs
* Conducted multivariate logistic regression of course-taking and degree completion for SLCC’s Engineering Department that identified financial/educational barriers for SLCC’s students.
* I conducted an attrition analysis leading to the creation of a new degree offering at SLCC.

## Research Analyst

Utah Commission on Criminal and Juvenile Justice

Salt Lake City, Utah

June 2015 - March 2016

* Used RecordLinkage package in R to categorize police and court records to the accompanying statute codes for the sake of reporting cleaned data to criminal justice commissioners
* Created plots that used publicly available GIS data to map discrete occurrence and density of various forms of police/criminal activity in counties across the state
* Wrote research proposal to estimate the scale and scope of new revenue sources for Salt Lake City traffic violations leveraging UDOT’s traffic camera and speed sensor data

## OTHER EXPERIENCE

## News Intern

All Things Considered KUER FM90.1

Salt Lake City, Utah

January 2009 - May 2009

* Conducted recorded interviews over the phone and in-person covering local daily news events
* Drafted two scripts per story and two stories per day to be read by an anchor on the afternoon edition of All Things Considered
* Required clear, efficient communication with a strong focus on accessibility by the general public

**CERTIFICATIONS**

Level 1 Mathematical Biostatistics from Johns Hopkins University

Design and Interpretation of Clinical Trials

Finding Hidden Messages in DNA (Bioinformatics I) (With Honors)

**TECHNICAL SKILLS**

* 2+ years SQL relational
* Microsoft Office
* JMP
* 7+ years of statistical programming and data visualization and dashboards in R (ggplot2, plotly, Shiny)
* 2 years of statistical programming and data visualization and dashboard in Python (plotly, ggplot, tkinter)
* 7+ years Data cleaning in R (tidyverse)
* 7+ years of Data visualization (ggplot2, Tableau, Microsoft Excel)
* 7+ years of social science research
* 1.5 years Python (Anacondas and Jupyter Notebook)
* Writing and presenting statistical reports (RMarkdown, Microsoft Powerpoint)
* Multivariate statistics (Bayesian structural time series, causal inference, hierarchical modeling, linear and mixed model regression, logistic regression, instrumental variable regression)
* Propensity score sample matching
* Time series forecasting
* Visual, written, and verbal communication
* Two years of statistical evaluation of preclinical and clinical drug safety testing studies