

Ian K. Kyle

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Education

University of California, Davis

Davis, CA

B.S., Psychology

Emphasis in developmental and biological psychology

University of California, Davis

Davis, CA

Minor, Statistics

Emphasis in statistical computing

American River College

Sacramento, CA

Community College, Psychology

Emphasis in human development

Experience

Education Analytics

Remote employee for Non-profit based in Madison, WI

Data Operations and Technology Strategist

Nov. 2016–present

I am the technical support and advocate for the Analyst Team as EA grows as an organization and individual projects become more diverse in their technological requisites. I understand current needs and anticipate future needs of the analyst team, and work to ensure these needs are met. Practically, I manage and guide the computation and data science infrastructure: R, RStudio, Python, Linux servers, and all database development, in addition to jumping in on projects with more complex technical needs. One week I'll be designing and implementing a neural network-based file classifier and the next I'll be writing a python package that helps analysts access a database I designed and built.

Value Added Research Center

University of Wisconsin, Madison Education Research Center

Programmer Analyst

Apr. 2015–Nov. 2016

Implement complex statistical models with SAS and R, perform research on predicting models for student behaviors and abilities, proposed and implemented unsupervised learning methods for tracking complex student trajectories.

UC Davis Agricultural Innovation Project

Remote

Software Developer

Oct. 2014–Dec. 2016

Proposed, designed, and built [Agroft](#): an open source statistics web application to help agriculture researchers in Pakistan analyze data from field trials and learn R. Written in R.

UC Davis MIND Institute

Sacramento, CA

Clinical Data Manager and Analyst

2010–Mar. 2015

Design and Maintain relational SQL database of medical data, construct complex datasets for collaborative projects, generate automated data reports with R and LaTeX, write scoring programs in MySQL stored procedure language, lead research projects as diverse as outlier detection in high dimensional data, enhanced matched sample techniques for small samples, and discovering psychophysiological (eye-traction, vocalization patterns) markers in autism.

Relevant Coursework

o Machine Learning

linear algebra, and machine learning methods. This course was heavy in R programming and focused on practical use of Machine Learning–taught by Duncan Temple-Lang, one of the core authors of R

o Mathematical Statistics

Probability theory, Bayes theorem, continuous and discrete probability models, PDFs, limit theorems, asymptotic theory, multivariate calculus

o Statistics in psychological research

Focused on research methods in psychology and statistical methods commonly used in behavioral research. Used R for all analyses

o Research Methods

Research ethics, common experimental designs used in research

Volunteer Work

University of Wisconsin Phylogenetics Computing Lab: I worked to translate algorithms for analyzing phylogenetic networks from R into Julia.

Injustice Boycott Analytics Lead: Led the Analytics team of the Injustice Boycott in an attempt to increase effectiveness of outreach campaigns.

Hobbies

Social Media Web-scraping and Analysis: I scrape data from Craigslist, OKCupid, Facebook, and Twitter using web crawlers and APIs, and look for trends in the data using regression, machine learning, natural language processing, data visualization, and more. I write up my results on a blog.

R blog: I maintain a blog with posts on various projects I've worked on or interesting problems I've encountered using R.

Social Justice Open Data Analysis: I look for novel ways to analyze open datasets to persuade local policymakers to enact progressive social policies

The Splodeyheads: I play drums in a jazz and blues band called "The Splodeyheads"

Interests

Technical.....

- Novel Uses for Existing Algorithms
- Interactive Data Visualization
- Web Scraping
- Exploratory Data Analysis/Data Mining and Feature Extraction
- Database Normalization
- Extract-Transform-Load workflows
- Open Source Software and Community
- Distributed Computing/Parallel Processing

Non-technical.....

- Social and Economic Justice
- Effective Communication of Technical Ideas
- Open Access to Information

Relevant Skills

- R and Python programming
- Data analysis
- Production machine learning pipelines
- Linux server management and bash shell
- PostgreSQL, MySQL, Relational Database Management, SQL Procedural Languages
- Regular Expressions
- L^AT_EX, Markdown, and automated reporting methods
- Microsoft Excel, Word, Powerpoint
- HTML and basic web development
- git, github, and version control
- Web APIs
- SAS code and macro language
- Applying research methods