# Kevin Trickey

Website | Linkedin

## SKILLS

**Programming:** TypeScript, JavaScript, Python, Java, C/C++, HTML, CSS, Swift, R, SQL
**Technologies:** Git, AWS, React, Angular, Bootstrap, Tailwind, REST, Pandas, Snowflake, NoSQL, data science, statistics

## EXPERIENCE

**UPSIDE Foods** **08/2020 – Present**
***Research Scientist*** | Upstream R&D Team *Berkeley, CA*
- Achieved >10x research throughput by building automated clone development tools capable of screening 1,000 samples per day
- Built industry-leading core research infrastructure, contributing to the US's first cultivated meat product and a $400M raise
- Created R&D data analysis workflows by building user interfaces, bioinformatic pipelines, dashboards, and statistical tools
- Led cross-functional cell line development and automation projects yielding industry-first, scalable, commercially viable cell lines

**Crossworthy.net** **05/2020 – Present**
***Founding Software Engineer*** *San Francisco, CA*
- Built web app featured in *New York Times* to enable collaborative crossword construction and play, used by 10,000+ players
- Designed multithreaded, in-browser autofill algorithm to speed up puzzle building workflow by 350x and reduce server costs 80%
- Invented industry-first, Google Docs-style real-time crossword editing on AWS Lambda and NoSQL architecture
- Developed scalable, serverless file-locking system to manage race conditions and resolve collisions between simultaneous users

**UChicago Medicine** **01/2018 – 07/2020**
***Data Science Research Assistant*** | Dept. Public Health Sciences *Chicago, IL*
- Created HIPAA-compliant, distributed analysis pipelines to aggregate and analyze 100's of millions of rows of healthcare data
- Invented creative matching algorithms to clean & merge messy datasets from insurance claims, self-reports, geospatial exposures
- Designed advanced statistical analysis techniques to find and study natural experiments as related to environmental epidemiology
- Published 2 first-author academic papers in *The Lancet* journal family as a junior research assistant

**Lumere** **06/2018 – 08/2018**
***Research Intern*** | Medical Devices Team *Chicago, IL*
- Maintained client-facing web database and interface providing the most up-to-date clinical research on 1,000+ medical devices
- Performed statistical analyses and generated custom visualizations to inform company recommendations to hospital clients

**Allesina Lab, University of Chicago** **04/2017 – 09/2017**
***Data Science Intern*** *Chicago, IL*
- Created genetic/evolutionary optimization algorithms, multiple-criteria/multiple-constraint Markov Chains, and other simulations
- Wrote scripts to scrape, clean, and analyze data to support theoretical ecology research papers predicting effects of climate change

## SELECTED PROJECTS

**Crossworthy Collaborate** **Stack: DynamoDB, Lambda (Node), SQS, API Gateway, Cognito, SES, React**
- Built serverless mutex architecture enabling Crossworthy users to collaborate real-time, scalably and securely, over websocket

**FracFocus Publicization** **Stack: Python, R, Selenium**
- Extracted chemical disclosure data from publicly queryable PDFs, augmented with additional chemical data, and released dataset

**Everyday Data** **Stack: Python, R, Pandas, Numpy, Pandas, ggplot, tidyverse**
- Wrote data collection and analysis scripts for a regular technical blog on data algorithms
- Implemented natural language processing and sentiment analysis algorithms to predict user engagement with jokes on Reddit
- Scraped lyrics from all songs in the Billboard 100's history, and wrote statistical analyses to discover language trends over time

**iOS App Development** **Stack: Swift**
- Developed and published 5 independent apps on the iOS App Store from 2016–2020 (discontinued support in 2021)
- Portfolio included 4 original iOS games and 1 team workout-tracking app

## PUBLICATIONS


- **Trickey, K.S., Chen, Z. and Sanghavi, P. (2023)** Hospitalisations for cardiovascular and respiratory disease among older adults living near unconventional natural gas development: a DID analysis. *The Lancet Planetary Health*, 7(3).
- **Trickey, K., Hadjimichael, N. and Sanghavi, P. (2020)** Public reporting of hydraulic fracturing chemicals in the USA, 2011–18: A before and after comparison of reporting formats. *The Lancet Planetary Health*, 4(5).


## EDUCATION

**The University of Chicago** **09/2016 – 06/2020**
***B.A. Statistics, B.S. Biological Sciences (Honors)*** *Chicago, IL*