# Jonathan Luu

jluu@g.harvard.edu • 408-889-3972 • www.jonathanluu.com

## Education

**Harvard University, Graduate School of Arts and Sciences** — Boston, MA
PhD, Biostatistics — May 2024

**University of Southern California, Keck School of Medicine** — Los Angeles, CA
MS, Biostatistics — May 2019

**University of Southern California, Viterbi School of Engineering** — Los Angeles, CA
BS, Computer Science & Computer Engineering — May 2017

## Research Experience

**Expanding the two-part model for clustered semi-continuous data** 2022
- Developed Bayesian model to efficiently analyze cost and healthcare utilization data in nursing homes
- Created joint metrics to effectively compare nursing homes
- Applied model and metrics to Medicare data consisting of 20 million nursing home residents

**Duration of viral shedding and culture positivity with post-vaccination breakthrough delta variant infections** 2021
- Collected viral load and culture samples from MGH employees who tested positive for SARS-CoV-2
- Performed survival analysis and a spline predictive analysis on the data

**Estimating the treatment effect in randomized trials with correlated time-to-event outcomes** 2020
- Simulated and compared three analysis methods for cluster randomized clinical trials

**LOFT-HF sample size re-estimation** 2020
- Re-estimated sample size for the LOFT-HF trial using blinded aggregate data
- Ran simulation sensitivity analyses for type-I error using sample size, power, accrual rate, and follow-up

**A phase I/II study of E7389 Halichondrin B analog in metastatic urothelial tract cancer and renal insufficiency** 2019
- Produced Kaplan-Meier plots, response and toxicity tables, and baseline statistics for DSMC report
- Analyzed data using multivariate Cox regression for progression-free and overall survival

**A simulation evaluation of the effectiveness and usability of the 3+3 design for phase I clinical trials** 2019
- Compared the 3+3 algorithm for phase I RCTs with more sophisticated methods through simulation

**Expanding access to home-based palliative care: a randomized controlled trial protocol** 2018
- Initiated and monitored REDCap database to collect data for the trial
- Summarized demographics, ineligibility criteria, and patient concerns to present to funding agencies

**Deep-web polar insights search engine** 2016
- Assembled search engine that crawled the deep web for polar-related research data
- Built branded website with inbuilt data visualization capabilities using Banana and D3.js libraries

## Teaching Experience

**Teaching Assistant**
- **Applied Survival Analysis (BST223)** 2021-2022
- **Intro to Data Science (BST260)** 2021-2022
- **Survival Methods in Clinical Research (BST224)** 2022

**Biostatistics Consulting Center** 2021-2022
- Consulted clients on study design, analysis planning, and programming
- Assisted with research projects, grant submissions, and student dissertations

**StatStart** 2021-2022
- Taught R programming and basic statistics to high school students
- Developed computational and problem solving skills by guiding students through a project

## Skills

**Programming (from most proficient to least):** C++, Java, R, Python, SAS, HTML/CSS, Stata, C, C#, Ruby, Julia, Stan
**Software:** Microsoft Office, Adobe Suite, AutoHotkey, Terminal, Linux, Bootcamp
**Typing WPM:** 175
**Other:** Git/GitHub, LaTex, Cadence, IT experience