

# Jonathan Luu

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## Education

<b>Harvard University, Graduate School of Arts and Sciences</b> PhD, Biostatistics	Boston, MA May 2024
<b>University of Southern California, Keck School of Medicine</b> MS, Biostatistics	Los Angeles, CA May 2019
<b>University of Southern California, Viterbi School of Engineering</b> BS, Computer Science & Computer Engineering	Los Angeles, CA May 2017

## Research Experience

<b>Expanding the two-part model for clustered semi-continuous data</b>	2023
<ul style="list-style-type: none"><li>Developed Bayesian model to efficiently analyze cost and healthcare utilization data in nursing homes</li><li>Applied model and metrics to Medicare data consisting of 20 million nursing home residents</li></ul>	
<b>Addressing incomplete and missing electronic health records data in implementation science</b>	2022
<ul style="list-style-type: none"><li>Characterized and quantified missing data in EHR databases maintained by community health centers</li></ul>	
<b>HaSET program: Analyzing stunting of newborns in Ethiopia</b>	2022
<ul style="list-style-type: none"><li>Analyzed data with significant measurement error to approximate prevalence of stunting in Ethiopia</li></ul>	
<b>Duration of viral shedding and culture positivity with post-vaccination breakthrough delta variant infections</b>	2021
<ul style="list-style-type: none"><li>Collected viral load and culture samples from MGH employees who tested positive for SARS-CoV-2</li><li>Performed survival analysis and a spline predictive analysis on the data</li></ul>	
<b>Estimating the treatment effect in randomized trials with correlated time-to-event outcomes</b>	2020
<ul style="list-style-type: none"><li>Simulated and compared three analysis methods for cluster randomized clinical trials</li></ul>	
<b>LOFT-HF sample size re-estimation</b>	2020
<ul style="list-style-type: none"><li>Re-estimated sample size for the LOFT-HF trial using blinded aggregate data</li></ul>	
<b>A phase I/II study of E7389 Halichondrin B analog in metastatic urothelial tract cancer and renal insufficiency</b>	2019
<ul style="list-style-type: none"><li>Produced Kaplan-Meier plots, response and toxicity tables, and baseline statistics for DSMC report</li><li>Analyzed data using multivariate Cox regression for progression-free and overall survival</li></ul>	
<b>A simulation evaluation of the effectiveness and usability of the 3+3 design for phase I clinical trials</b>	2019
<ul style="list-style-type: none"><li>Compared the 3+3 algorithm for phase I RCTs with more sophisticated methods through simulation</li></ul>	

## Work Experience

<b>Intern: Bristol Myers Squibb</b>	2023
<ul style="list-style-type: none"><li>Explored correlation between surrogate endpoints and overall survival in cancer trials</li><li>Ran models stratified by indication and treatment type to quantify correlated relationship further</li></ul>	
<b>Research Assistant: Boston College</b>	2023
<ul style="list-style-type: none"><li>Ran multiple-period cluster-randomized crossover trial to test the effectiveness of motivational interviewing and behavioral health services on COVID-19 vaccine uptake among Latinx adults</li></ul>	
<b>Research Assistant: Enguidanos Labs</b>	2018
<ul style="list-style-type: none"><li>Monitored REDCap database to collect data for a palliative care trial comparing home-based vs. hospital-based palliative care</li><li>Presented demographics, ineligibility criteria, and patient concerns to funding agencies</li></ul>	

## Teaching Experience

<b>Teaching Assistant</b>	
<ul style="list-style-type: none"><li>Applied Survival Analysis (BST223)</li><li>Intro to Data Science (BST260), Survival Methods in Clinical Research (BST224)</li></ul>	2021-2023 2020-2022
<b>Biostatistics Consulting Center</b>	2021-2022
<ul style="list-style-type: none"><li>Consulted clients on study design, analysis planning, and programming</li></ul>	
<b>StatStart</b>	2021-2023
<ul style="list-style-type: none"><li>Taught R programming and basic statistics to high school students through a summer project</li></ul>	

## Skills

**Programming (from most proficient to least):** C++, Java, R, Python, SAS, HTML/CSS, Stata, C, C#, Ruby, Julia, Stan