

# Brandon Ye

[branye@usc.edu](mailto:branye@usc.edu) | [brandonye.info](http://brandonye.info)

## Research Statement

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I am interested in leveraging computation to advance medicine, especially in the domains of surgical decision-making and health equity. My current research seeks to use multimodal data to develop more **robust, interpretable, and equitable** ways to model and treat disease. I explore this through patient-level cancer prediction models under conditions of data scarcity, blood filtration therapies for cancer, and data collection methods for homelessness research and health policy.

## Education

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### University of Southern California

MS in Quantitative and Computational Biology, GPA: 4.00  
*Progressive Degree Program*

Los Angeles, CA

Nov. 2023 – present

### University of Southern California

BS in Quantitative Biology (with honors), Minor in Artificial Intelligence, GPA: 4.00  
*Presidential Scholarship, Phi Beta Kappa, Goldwater Scholarship*

Los Angeles, CA

Aug. 2021 – present

## Research Experience

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### USC Street Medicine

Undergraduate Researcher, Dr. Alexis Coulourides Kogan

Los Angeles, CA

Mar. 2024 – present

### USC Convergent Science Institute in Cancer

Undergraduate Research Fellow, Drs. Jeremy Mason and Peter Kuhn

Los Angeles, CA

Oct. 2021 – present

## Publications

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- Stephanie Shishido, Divya Suresh, George Courcoubetis, **Brandon Ye**, Emmeline Lin, Jeremy Mason, Ken Park, Michael Lewis, Ruoxiang Wang, Simon Lo, Peter Kuhn, and Stephen Pandol. "Determining the Efficacy of ExThera Seraph100 Blood Filtration in Patients Diagnosed with Pancreatic Cancer through the Liquid Biopsy." *BJC Reports* (2024). ([paper](#))
- Stephanie Shishido, Alireza Ghoreifi, Salmaan Sayeed, George Courcoubetis, Amy Huang, **Brandon Ye**, Sankalp Mrutyunjaya, Inderbir Gill, Peter Kuhn, Jeremy Mason, and Hooman Djaladat. "Liquid Biopsy Landscape in Patients with Primary Upper Tract Urothelial Carcinoma." *Cancers* (2022). ([paper](#))
- Miguel Bugayong, Aileen Cha, Carly Hamel, Ryan Johnson, James Kim, Joseph Kim, Andrew Levy, Kenneth Nguyen, Luc Pham, Anusha Sapre, Aidan Scanlan, **Brandon Ye**, and Christa Bancroft. "Genome Sequences of *Arthrobacter globiformis* B-2979 Phages GlobiWarming and TaylorSipt." *Microbiology Resource Announcements* (2022). ([paper](#))

## Posters and Presentations

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### 4th Annual Conference for Human-Centered Artificial Intelligence | Malibu, CA

Sep. 2024

- Invited Talk: AI and data science to enhance patient-level modeling in cancer

### American Association for Cancer Research 2024 Annual Meeting | San Diego, CA

Apr. 2024

- Poster: Evaluating a novel blood filtration therapy for prostate cancer using a liquid biopsy

### West Coast Biological Sciences Undergraduate Research Conference | Los Angeles, CA

Apr. 2023

- Poster: Modeling survival outcomes for bladder cancer and UTUC

### USC Undergraduate Research Symposium | Los Angeles, CA

Apr. 2023

- Poster: Building recurrence prediction models for UTUC under conditions of data scarcity

## Honors and Awards

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<b>Goel Family Scholarship</b> (\$4.5k)   USC	Jun. 2024
<b>Quantitative and Computational Biology Google Alumni Award</b> (\$500)   USC	Apr. 2024
<b>Barry M. Goldwater Scholarship</b> (\$7.5k)   Barry Goldwater Scholarship Foundation ( <a href="#">press</a> )	Apr. 2024
<b>Dean Joan Metcalf Schaefer Scholarship</b> (\$7.5k)   USC	Apr. 2024
<b>Phi Beta Kappa</b>   Phi Beta Kappa Society	Feb. 2024
<b>Provost's Undergraduate Research Fellowship</b> (\$3k)   USC	Summer 2024
<b>Provost's Undergraduate Research Fellowship</b> (\$1k)   USC	Spring 2024
<b>George H. Mayr Foundation Scholarship</b> (\$6k)   USC	Jun. 2023
<b>Provost's Undergraduate Research Fellowship</b> (\$3k)   USC	Summer 2023
<b>Provost's Undergraduate Research Fellowship</b> (\$1k)   USC	Spring 2023
<b>Provost's Undergraduate Research Fellowship</b> (\$1k)   USC	Fall 2022
<b>Dornsife Summer Undergraduate Research Fellowship</b> (\$3k)   USC	Summer 2022
<b>University Scholarship</b> (\$8k)   USC	Mar. 2021
<b>Presidential Scholarship</b> (\$125k)   USC	Mar. 2021
<b>National Merit Scholarship</b> (\$2k)   USC	Mar. 2021

## Teaching

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<b>BISC 121: Advanced Organismal Biology and Evolution</b> Supplemental Instructor   USC	Fall 2024
<b>BISC 312: Molecular Biochemistry</b> Supplemental Instructor   USC	Spring 2024
<b>PHYS 135b: Physics for the Life Sciences (E&amp;M)</b> Supplemental Instructor   USC	Fall 2023
<b>QBIO 490: Multiomic Data Analysis</b> Teaching Assistant   USC	Spring 2023

## Mentorship, Leadership, and Service

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<b>Cancer Undergraduate Research Experience</b> Co-lead; large-scale lab events for 20+ undergraduates ( <a href="#">site</a> )	2023 – present
<b>USC Quantitative Biology Association</b> President; career and mentorship events for 100+ students	2023 – present
<b>Southern California Undergraduate Research Journal</b> Editor-in-chief; recruitment, revision, and funding	2023 – present
<b>USC Science Outreach</b> Member; weekly science experiments for LA elementary schools ( <a href="#">site</a> )	2021 – present
<b>Empower Prep</b> Co-founder; educational technology platform for standardized testing with 100k+ users	2019 – 2021