Christopher Allsman

(559) 288 2499 • callsman97@gmail.com • linkedin.com/in/christopher-allsman

Education

MA in Biomedical Informatics   2022-2025
Columbia University
Thesis - *Evaluating Privacy-Preserving GWAS Summary Statistic Release*
GPA: 4.09

BA in Computer Science   2015-2019
The University of California, Berkeley
GPA: 3.866 (Graduated with High Distinction)

Experience

G2 Lab - Columbia University, New York, NY   2023 -
Researcher (Master's Student 2023-2025, Short-Term Worker 2025-)
- Under Dr. Gamze Gürsoy, demonstrate the accuracy and robustness of privacy mechanisms across heterogeneous populations by researching and implementing membership inference attacks under different threat models
- Define statistical models for genomic data and derive tight bounds on the privacy protection of differentially private methods in the presence of hypothesis-testing based attacks

OpenText   2020 -
Senior Software Engineer
- Write Java code to maintain and develop new features for the JavaScript, Solidity, and SQL areas of OpenText's Software Application Security Testing (SAST) product to identify security vulnerabilities in enterprise software by generating intermediate representations of source code, modifying static analysis algorithms, and improving user experience
- Collaborate with security researchers to develop a new API for defining security rules with increased flexibility and reduced boilerplate, enabling the migration of nearly 1,000 legacy rules
- Support JavaScript frameworks including SAPUI5, Handlebars, and Vue, ensuring interoperability by introducing type propagation across components - allowing for the detection of over 30 new vulnerabilities and scans that are 20% faster with up to 15% fewer false positives

University of California, Berkeley   2017-2019
CS61A Instructor (2019), Teaching Assistant, Head of Content (2017 -2019)
- Spearheaded design and testing for content distributed to over 1,500 students each semester for Berkeley's introductory computer science class, including homework, labs, exams, and the course's first new project since 2015, which is still in use
- Analyzed feedback from over 200 students to devise curricular elements for the course's first online offering, including virtual discussion, lab, and review sessions

Service

Translational Biology Year-in-Review Committee   2024
Volunteer Reviewer
- Read and ranked journal articles identified via a systematic literature search to identify candidate papers to be presented as part of the 2024 American Medical Informatics Association (AMIA) Translational Biology Summit keynote presentation

Microsoft TEALS (Technology Education and Literacy in Schools)   2021-2022
Volunteer Teacher
- Developed a year-long computer science class covering introductory programming concepts in Snap! and Python for a high school that would not otherwise be able to offer programming courses
- Present lessons and organize activites bi-weekly for a group of 12 students, including semester capstone projects

Computer Science Mentors   2016-2019
Internal Vice President (2019), Course Coordinator (2018), Mentor (2016-2017)
- Facilitated small-group tutoring sections for 7 introductory computer science courses at UC Berkeley by overseeing scheduling and content creation, scaling the organization to support over 1,500 students and 300 mentors
- Led training given to 100+ mentors at a bi-annual orientation, including introducing material covering multicultural competency

Peer-Reviewed Publications

Kashyap, A.[†], **Allsman, C.**[†], Campbell, E., Desai, P., Vople. S, Massey B., Bright, T., Bakken, S., Bear Don't Walk, O., and Pichon, A. (2025). *Contextualizing key principles to promote a justice-oriented informatics research agenda: proceedings and reflections from an American Medical Informatics Association workshop.* Journal of the American Medical Informatics Association. *In Press.*

Peer-Reviewed Conference Presentation Abstracts

Kashyap, A., **Allsman, C.**[*], Campbell, E., Desai, P., Vople. S, Massey B., Bakken, S., Bear Don't Walk, O., and Pichon, A.[*], (2024). *A Broad Perspective on Justice-Oriented Research in Biomedical Informatics* [Podium Abstract]. AMIA 2024 Symposium, San Franciso, CA.

Pichon, A., Volpe S., Kashyap, A.[*], Desai, P. Anand, T. Campbell, E., Schiffer-Kane K., Diamond, C., Massey B.[*], **Allsman, C.**, Newbury, A., Richter, L., Bright, T., Bakken, S. and Bear Don't Walk, O. (2023). *Synthesizing Gaps and Priorities for a Justice Informatics Research Agenda* [Podium Abstract]. AMIA 2023 Symposium, New Orleans, LA.

Parlante, N., Zelenski, J., DeNero, J., **Allsman, C.**, Perumpail, T., Arya, R., Gupta, K., Cang, C., Bitutsky, P., Moughan, R., Malan, D., Yu, B., Peck, E., Albing, C, Wayne, K, and Schwarz, K. (2020). *Nifty Assignments* [Demo Session]. SIGSCE 2020 Technical Symposium, Remote.

Teaching

UC Berkeley

COMPSCI 61A The Structure and Interpretation of Computer Programs

Co-Instructor - Su19 (Class size: 450 students)
Head TA - Fa18, Sp19 (Section size: 30 students)
TA - Fa17, Sp18, Su18 (Section size: 30 students)
Course Tutor - Sp17

COMPSCI W61A The Structure and Interpretation of Computer Programs (Online)

Co-Facilitator & Course Designer - Su19 (Class size: 200 students)

COMPSCI 61C Great Ideas of Computer Architecture (Machine Structures)

Course Tutor - Su17

[†]Co-First Author
[*]Speaker