Jean Salac, PhD

Postdoctoral Researcher | Computing Education

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Education

2021 PhD | Computer Science | University of Chicago | National Science Foundation Graduate Research Fellow
2020 MS | Computer Science | University of Chicago
2017 BS | Computer Science | University of Virginia | High Distinction

Professional Experience

Jan '22-Present Postdoctoral Researcher, University of Washington

Jul '17-Dec '21 Research Assistant, University of Chicago
- Applied human factors, statistical, and machine learning techniques to analyze student data.
- Built a tool for automatic generation of personalized written assessments that incorporates student code, and a tool that scraped features of student code for static analysis.

Jun-Sep 2021 AI/ML Education Research Intern, Apple Inc
- Explored opportunities to introduce data science practices to K-12 students in Swift Playgrounds
- Incorporated the latest findings in computing education research into Apple's education strategy

Sep '17-Dec '18 Teaching Assistant, University of Chicago

Jan '16- May '17 Research & Teaching Assistant, University of Virginia
- Researched problematic demographic categories used in STEM higher education.
- Investigated the impact of informal computing education on low-income female youth of color.

May-Aug 2016 Computer Science Education Intern, National Science Foundation
- Analyzed prior NSF CS education and broadening participation initiatives.
- Researched social innovation best practices to help shape President Obama's CS for All initiative.

Honors, Awards, and Prominent Appointments

2021 William Rainey Harper Dissertation Award, University of Chicago's Highest Honor for Graduate Students
2020-Present Graduate Fellow, Computing Research Association - Education
2020 EECS Rising Star, Rising Stars Academic Career Workshop for Women
2020 Best Reviewed Paper, ACM Conference on International Computing Education Research
2020 Online Organizing Committee Member, IEEE RESPECT Conference for Equity and Sustained Participation
2019 Graduate Research Fellowship, National Science Foundation
2019 Bridge Builder Leadership Award, University of Chicago
2019 Computer Science Department Teaching Award, University of Chicago
2019 Physical Science Division Teaching Award Nomination, University of Chicago
2018 Graduate Student Leadership Award, University of Chicago
2017 Rader Award for Undergraduate Research, University of Virginia
2016 AAPI Young Leader, White House Initiative for Asian-Americans and Pacific Islanders (WHIAAPI)

Select Service

2018-Present Computer Science Liaison, University of Chicago Graduate Recruitment Initiative Team
2019-21 Computer Science Representative, University of Chicago Committee on Equity, Diversity, & Inclusion
2019-20 Co-Organizer, University of Chicago Women in STEM Symposium
2018-19 Co-Chair & Founder, University of Chicago Graduate Women in Computer Science
2018 Co-Organizer, University of Chicago Transcending Boundaries Research Symposium for Scholars of Color

Invited Talks and Workshops

March 2021 *"Scratch Strategies to Engage Diverse Learners"*, Equity in Action Conference, Computer Science Teachers Association
February 2021 *"Scratch Strategies to Engage Diverse Learners"*, Excellence in Teaching Conference, Notre Dame University
2020-21 *Workshop on the Next 15 Years of Computing Education Research*, National Science Foundation
November 2020 *Accessible Computer Science Education Workshop*, Microsoft Research

Publications

2021 **Jean Salac**, Cathy Thomas, Chloe Butler, and Diana Franklin. "Investigating the Role of Cognitive Abilities in Computational Thinking for Young Learners." In *Proceedings of the 2021 ACM Conference on International Computing Education Research*, 2021.

2021 **Jean Salac**, Cathy Thomas, Chloe Butler, and Diana Franklin. "Understanding the Link between Computer Science Instruction and Reading & Math Performance." Research Paper in the *27th Annual Conference on Innovation and Technology in Computer Science Education*, 2021.

2021 **Jean Salac**, Cathy Thomas, Chloe Butler, and Diana Franklin. "Supporting Diverse Learners in K-8 Computational Thinking with TIPP&SEE." Research Paper in the *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education*, 2021.

2020 Diana Franklin, **Jean Salac**, Zachary Crenshaw, Saranya Turimella, Zipporah Klain, Marco Anaya, Cathy Thomas. "Exploring Student Behavior Using the TIPP&SEE Learning Strategy" In *Proceedings of the 2020 ACM Conference on International Computing Education Research*, 2020. **Best Reviewed Paper Award**

2020 **Jean Salac** and Diana Franklin. "If They Build It, Will They Understand It?: Exploring the Relationship between Student Code and Performance." Research Paper in the *25th Annual Conference on Innovation and Technology in Computer Science Education*, 2020.

2020 **Jean Salac**, Cathy Thomas, Bryan Twarek, William Marsland, and Diana Franklin. "Comprehending Code : Understanding the Relationship between Reading and Math Proficiency, and 4th-Grade CS Learning Outcomes." Research Paper in the *Proceedings of the 51st ACM Technical Symposium on Computer Science Education*, 2020.

2020 **Jean Salac**, Cathy Thomas, Chloe Butler, Ashley Sanchez, and Diana Franklin. "TIPP&SEE : A Learning Strategy to Guide Students through Use–>Modify Scratch Activities." Research Paper in the *Proceedings of the 51st ACM Technical Symposium on Computer Science Education*, 2020.

2020 **Jean Salac**, Qi Jin, Zipporah Klain, Saranya Turimella, Max White, and Diana Franklin. "Patterns in Elementary-Age Student Responses to Personalized & Generic Code Comprehension Questions." Research Paper in the *Proceedings of the 51st ACM Technical Symposium on Computer Science Education*, 2020.

2020 Diana Franklin, **Jean Salac**, Cathy Thomas, Zené Sekou and Sue Krause. "Eliciting Student Scratch Script Understandings via Scratch Charades." Experience Report in the *Proceedings of the 51st ACM Technical Symposium on Computer Science Education*, 2020.

2019 **Jean Salac**, Max White, Ashley Wang, and Diana Franklin. "An Analysis through an Equity Lens of the Implementation of Computer Science in K-8 Classrooms in a Large, Urban School District." Research Paper in the *Proceedings of the 50th ACM Technical Symposium on Computer Science Education*, 2019.

2018 David Weintrop, Afsoon Afzal, **Jean Salac**, Patrick Francis, Boyang Li, David C. Shepherd, and Diana Franklin. "Evaluating CoBlox : A comparative study of robotics programming environments for adult novices." In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 2018. **Best Paper Honorable Mention**

2018 Daniel S. Katz, Kyle E. Niemeyer, Sandra Gesing, Lorraine Hwang, Wolfgang Bangerth, Simon Hettrick, Ray Idaszak, **Jean Salac**, Neil Chue Hong, Santiago Nunez-Corrales, Alice Allen, R. Stuart Geiger, Jonah Miller, Emily Chen, Anshu Dubey, and Patricia Lago. "Fourth workshop on sustainable software for science : practice and experiences (WSSSPE4)." *Journal of Open Research Software* 6, no. 1 (2018).