

# Ryan Moreno

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## PERSONAL STATEMENT

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My career goals are (1) to further foundational knowledge in computational theory, specifically complexity theory, through research and collaborations and (2) to empower others through teaching and mentorship. With these goals in mind, I aim to become a CS theory professor.

## EDUCATION

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**University of Wisconsin-Madison** Expected: May 2025  
• Ph.D. in Computer Science

**University of Southern California** May 2020  
• Bachelor of Science 3.99 GPA  
• Major in Computer Science, Minor in English  
• Renaissance Scholar, Discovery Scholar, and Engineering Honors

## AWARDS

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• USC Valedictorian Finalist (institutional award; 6 finalists)	2020
• USC Computer Science Outstanding Student Award (departmental award; 17 awarded)	2020
• Renaissance Scholar Distinction and Prize Recipient (institutional award; 10 awarded)	2020
• Discovery Scholar Distinction and Prize Finalist (institutional award; 35 finalists)	2020
• Viterbi Award for Best Research Paper: 1st Place (school-wide award)	2020
• Viterbi Award for Best Analytical/Expository Essay: 3rd Place (school-wide award)	2020
• Trustee Scholar Full-Tuition Scholarship (institutional award; 117 awarded)	2016-2020
• National Merit Scholar (national award; 0.475% acceptance)	2016
• Viterbi Fellow (school-wide award)	2016-2020
• W.V.T Rusch Undergraduate Engineering Honors Program (school-wide award)	2016-2020
• Dean's List (institutional award)	2016-2019

## RESEARCH EXPERIENCE

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**USC Intelligence and Knowledge Discovery Research Lab** Sep 2019 - present  
*Merit Research Fellow, Undergraduate Honors Thesis*

- Implemented novel distantly-supervised machine learning techniques that use trigger phrases to recognize named entities in sentences
- Developed algorithms to generate adversarial examples for NER, evaluating the robustness of existing state-of-the-art NER models

**USC WRIT 340: Advanced Writing for Engineers** Sep 2018 - Dec 2018  
*Research Proposal*

- Completed a literature review of rule-based poetry generation and deep learning techniques for creative image and sound generation
- Developed a proposal to use deep learning for automated poetry generation
- Presented the proposal at the Viterbi Student Speaker Symposium
- Received the Viterbi Award for Best Research Paper (1st place)

**USC Interaction Lab**

Jan 2017 - May 2017

*Merit Research Fellow*

- Developed socially-assistive robots to teach social skills to children with autism in a non-intimidating environment

**Oregon State University Walker Lab**

Jun 2015 - Aug 2015

*Research Intern*

- Fabricated microfluidic devices to measure extensional viscosity using 3D printing, photolithography, and soft lithography
- Presented at the Apprenticeships in Science and Engineering Symposium

**TEACHING EXPERIENCE**

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**USC Viterbi Teaching Staff**

Aug 2017 - present

*Undergraduate Teaching Assistant**CSCI 103: Introduction to Programming*

- Taught weekly lab sections, held office hours, graded assignments, and proctored and graded exams

*CSCI 170: Discrete Methods in Computer Science*

- Taught weekly discussion sections, created course content and supplemental materials, held office hours, graded assignments, and proctored and graded exams

*CSCI 270: Introduction to Algorithms and the Theory of Computing*

- Taught weekly discussion sections, created course content and supplemental materials, held office hours, graded assignments, and proctored and graded exams

**K-12 Tutoring and Classroom Assistance**

Aug 2016 - present

*See “service” section below***INDUSTRY EXPERIENCE**

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**Microsoft**

May 2019 - Aug 2019

*Software Development Intern*

- Created a feature supporting the import of Office documents into the Microsoft Whiteboard App (released to the public October 2019)
- Spanned product management, design, business operations, and software development
- Created code actions for Q# (Microsoft’s Quantum language) within VS Code as a hackathon project

**Facebook**

May 2018 - Jul 2018

*Software Development Intern*

- Implemented a new approach to app event tracking within Facebook’s software development kit for iOS apps
- Worked server-side and app-side for full stack development
- Designed a new timeline privacy setting as a hackathon project

## Metro Paws

May 2017 - Jul 2017

### Product Design Intern

- Researched, interviewed, and selected alternate manufacturing facilities
- Redesigned a doggy bag dispenser and designed a cat bed and display using AutoCAD
- Researched alternate, eco-friendly materials

## USC 3D4E

Jan 2017 - May 2017

### Lab Tech

- Held weekly lab hours to assist members with 3D printing

## PUBLICATIONS

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- Bill Yuchen Lin, Dong-Ho Lee, Ming Shen, Ryan Moreno, Xiao Huang, Prashant Shiralkar, and Xiang Ren. *Entity Triggers: Learning with Explanations for Named Entity Recognition*. Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics. 2020.
- Ryan Moreno. *A Kid's Guide to Coming Out*. Introducing Magazine. 2018.

## PRESENTATIONS

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- Ryan Moreno. *Automated Poetry Generation using Deep Learning*. Viterbi Student Speaker Symposium, University of Southern California. November 2019.
- Ryan Moreno. *Introduction to Secure Mutli-Party Computation*. Cryptography: Secure Communication and Computation, University of Southern California. November 2019.
- Ryan Moreno. *Fabrication of Microfluidic Devices for Advanced Rheological Measurements*. Apprenticeships in Science and Engineering Symposium, Portland, OR. August 2015.

## CONFERENCES

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- Out for Undergrad: LGBTQ+ tech conference Sep 2018
- AthenaHacks: *received runner-up for best iOS app* Apr 2017
  - Created a “choose your own adventure” iOS app to teach children about bullying

## TECHNICAL SKILLS

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- *Programming Languages*: C++, C#, PHP, Java (*intermediate*)
- *Programming Languages*: Obj-C, Python, Prolog, Racket, JavaScript (*basic*)
- *CS Skills*: SQL, Networking (*basic*), LaTeX (*intermediate*)
- *Engineering Skills*: Solidworks, CAD, 3D Printing, Woodworking, Machining, Welding (*intermediate*)

## SERVICE

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### USC Troy Camp

Aug 2018 - present

#### Counselor and Mentor

- **TC Leads**
  - Tutored and mentored high school students weekly
  - Led workshops in topics left out of school curriculums such as financial literacy and postgraduate opportunities
- **Elementary Programming**
  - Tutored and mentored elementary school students weekly
  - Taught after school dance, PE, and sports programs
- **Summer Camp**
  - Led a cabin of ten 4th grade boys during a week-long sleep away camp
  - Hosted monthly events for these same ten students during the school year

**USC Joint Educational Program**

Aug 2016 - Dec 2016

*Classroom Assistant*

Aug 2017 - Dec 2017

- Assisted in an 8th grade math class
- Taught a mini-course on poetry in a 5th grade English class

**USC Project 32**

Jan 2017 - May 2017

*Classroom Assistant*

- Assisted in a 12th grade study hall for students at risk of not graduating

**USC Robogals**

Jan 2017 - Dec 2017

*Events Chair*

- Engaged elementary and middle school students in STEM through Lego robotics and engineering workshops

**INTERESTS**

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USC Triathlon Team, USC Outdoors Club (*guide*), Creative Writing (*published*), Piano