

# Ryan Moreno

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## PERSONAL STATEMENT

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My career goals are (1) to apply computer science to medicine, through research and collaboration across fields and (2) to empower others through teaching and mentorship. With these goals in mind, I aim to become a professor in CS.

## EDUCATION

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<b>University of Wisconsin-Madison</b>	Expected: May 2025
• Ph.D. in Computer Science	4.0 GPA

<b>University of Southern California</b>	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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<b>Cross-Institutional CS Education Research Team</b>	Oct 2020 - present
<i>Researcher</i>	

- Interviewed undergraduate CS students to understand and categorize misconceptions in dynamic programming, a fundamental paradigm in undergraduate algorithms courses

<b>USC Intelligence and Knowledge Discovery Research Lab</b>	Sep 2019 - May 2020
<i>Merit Research Fellow, Undergraduate Honors Thesis</i>	

- 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 help children with autism develop their social skills in a nonintimidating 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

## 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

## TEACHING EXPERIENCE

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### UW-Madison

Aug 2020 - present

#### *Head Teaching Assistant*

##### *CS 577: Introduction to Algorithms*

- Taught two weekly discussion sections, developed course content and supplemental materials, managed student progress, directed undergrad TAs, held office hours, and graded coursework

## USC Viterbi

Aug 2017 - July 2020

### Undergraduate Teaching Assistant

CSCI 103: Introduction to Programming, CSCI 170: Discrete Methods in Computer Science, CSCI 270: Introduction to Algorithms and the Theory of Computing

- Taught weekly lab and 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 - May 2020

See “service” section below

## 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

## SKILLS

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- *Programming Languages*: C++, C#, PHP, Java (*intermediate*)
- *Programming Languages*: Obj-C, Python, Prolog, Racket, JavaScript (*basic*)
- *CS*: SQL, networking (*basic*), LaTeX (*intermediate*)
- *Engineering*: Solidworks, CAD, 3D printing, woodworking, machining, welding (*intermediate*)
- *Language*: Analytical and creative writing, French (*intermediate*)
- *Medical*: Wilderness First Responder certified (includes First Aid/CPR/AED)

## SERVICE

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### USC Troy Camp

Aug 2018 - May 2020

#### 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 girls in STEM through Lego robotics and engineering workshops

**INTERESTS**

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Triathlon, Backpacking (*guide*), Creative Writing (*published*), Piano