



# MAX COLLINS

## Curriculum Vitae

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### OBJECTIVE

Obtain a role designing software and user experiences in order to utilize HCI skills and technical background in tandem.

### EDUCATION

#### **Ph.D. | University of California Irvine**

2017 – CURRENT

Informatics Ph.D. student, Donald Bren School of Information and Computer Sciences. EDGE Fellowship recipient. Advisor: Kurt Squire.

#### **Bachelors | University of Illinois at Urbana-Champaign**

2013 – 2017

B.S. Psychology, Informatics; Graduation year: 2017. Presidential Award Scholar. AAP Scholar.

### EXPERIENCE

#### **NSF DREU Intern | Carnegie Mellon University, HCII, Articulab**

SUMMER 2017

Took part in the development of an embodied conversational agent (ECA), in this study an intelligent virtual child, to engage in a collaborative tabletop game called Outbreak, and elicit curiosity during the game play. This project (SCIPR: Sensing Curiosity in Play and Responding) aims to foster curiosity in children to improve learning and self-drive. Performed human interaction observation, transcription, coded verbal/nonverbal behaviors, created finite state machine for AI agent, iterative design and frequent play testing. Worked within the Articulab at CMU under Dr. Justine Cassell. Funded through NSF.

#### **NSF REU Intern | NYU Center for Behavioral Statistics and the Study of Motivated Perception**

SUMMER 2016

Training in experimental research design and behavioral statistics with professors and doctoral students. Training in eye tracking, psychophysiology, dyadic interactions and video analysis. Contributed to interdisciplinary and transformative research across multiple domains including emotion, health, relationships, jury decisions, politics, and others while maintaining a single intellectual focus on the study of motivated perception. Produced novel research, an APA-style manuscript, and presented work. Took part in study design, surveying participants, data analysis (SPSS), and running participants in various studies. Funded through NSF.

## **NSF REU Intern | Blue Waters Student Internship Program**

SUMMER 2015

Learned about high performance computing and parallel computing at the supercomputer level while working on a project with professor Alan Craig involving augmented reality visualization of a plethora of scientific data. Worked with professors, scientists, and researchers to understand the needs in the field in order to create the most useful application in our power. Developed an augmented reality application for visualizing large amounts of molecular data using Unity 3D and various programming/scripting languages. Funded through NSF.

## **CITL Intern | University of Illinois at Urbana-Champaign**

2016 – 2017

Worked for the school of Veterinary Medicine at University of Illinois at Urbana-Champaign to create a piece of software to visualize bone structure data of animals for use in classes. Developed application in order to aid veterinary students and professors in the classroom so that they would not need to use pdf printouts any longer.

## **Research Assistant – Connected Learning Lab | University of California Irvine**

2017 – CURRENT

Participating in designing studies and conducting research, overseen by advisor Kurt Squire.

## **Research Assistant/Software Developer – CoLearn Lab | University of Illinois at Urbana-Champaign**

2016 – 2017

Performed work writing and revising software for a lab on campus in order to create an application used for research and eventual distribution. The application, [Food for Thought](#), creates a visual representation of foods we consume on a table that users can manipulate and see the ecological imprint of their choices. Used html, JavaScript, node, and other software to deploy to Windows surfaces and Mac OSX machines.

## **Research Assistant – Vision Lab | University of Illinois at Urbana-Champaign**

2015 – 2017

Perform research experiments testing human attention in a cognition lab in the Psychology department. Ran studies using eye trackers, used methods such as survey and interview, and got extensive experience on various qualitative and quantitative methodologies.

## **Unity Developer – Transformative Play Lab | University of California Irvine**

2018 — CURRENT

Working as a Unity developer to develop an interactive augmented reality experience for scenic designers and other theater production team members.

## **Resident Advisor | University of Illinois at Urbana-Champaign**

2014 – 2017

Oversaw residents in the university residential halls, planned programs for residents, maintained safety on campus. Responsible for creating bulletin boards, new ways of engaging residents, and aiding students in working through any personal, academic, or other struggles.

## **IEFX Summer Scholar | University of Illinois at Urbana-Champaign**

SUMMER 2013

Took summer courses and learned about engineering at Illinois and what working at different large companies involving engineering looks like. Met with representatives of large companies who work with different types of engineers, and began college a full semester early. Awarded the IEFX Summer Scholars Scholarship.

## **Tutor | Niles West Literacy Center**

2010-2013

Tutored math, science, history, and English to high school students at one of the largest tutoring centers.

## **IS Intern | Niles West High School**

2011 – 2012

Perform software installations and upgrades across the entire school network. Complete routine maintenance tasks, troubleshoot, complete work orders upon faculty members' request.

## **Senior Tech Leader, Anywhere Anytime Learning Help Desk | Niles West High School**

2009 – 2013

Perform diagnostics and machine repairs on a 1,200 device netbook inventory. Image computers, execute Dell work orders, maintain working relationship with Dell warranty depot. Supervise student tech leaders, train students in web 2.0 application basics.



## **SKILLS**

- Technical: C#, Python, HTML/CSS, SQL, Java, UNIX, Unity3D, VR, AR, HCI, NLP, Microsoft Office, Google Apps, Mac OSX, Windows, Linux, Unix, HPC, Parallel Computing, iOS, Android
- Team work, project leadership
- Self-learning
- Interpersonal communication
- Project management
- Languages: English, Spanish
- HCI, UX, UI design



## **PUBLICATIONS**

Collins, M. & Craig, A. (2016). VisMo: Augmented Reality Visualization of Scientific Data and Molecular Structures. *JOCSE: Journal of Computational Science Education*, 8(1), 12-15. DOI: 10.22369/issn.2153-4136/8/1/3.



## **HONORS/AWARDS**

- Edge Fellowship – 2017 – 2022
- UCI Chair's Award – 2017
- Presidential Award Scholarship – 2013 – 2017
- College of LAS Certificate of Excellence for outstanding academic performance –2017
- OMSA Academic Excellence Certificate – 2016, 2017
- LAS AAP Scholar – 2015 – 2017
- NSF REU Travel Grant – 2016
- LAS Certificate of Highest Distinction for Outstanding Academic Achievement – 2016
- ASPIRE member – 2016
- NYU Diversity Summer Student Research Conference Certificate – 2016
- IEFX Scholarship – 2013
- Preliminary SAT/National Merit Scholarship Qualifying Test Finalist – 2012
- Global Leadership and Philanthropy NIU Scholarship Award Recipient – 2012
- National Honors Society Member – 2012 – 2013
- Renaissance Tutor, Literacy Center Niles West High School – 2012-2013
- Sociedad Honoraria Hispánica—2011



## PRESENTATIONS

- CMU Articulab Final Presentation – Summed up my summer research to the lab—Summer, 2017
- Blue Waters Institute 2017 – Spoke about work on AR visualization – Summer, 2017
- NYU Diversity Summer Student Research Conference – Presented on research on police/public relationships – Summer, 2016
- ACCA – Spoke to colleges in Chicago regarding my visualization work – Fall, 2015
- National Conference on Peer Tutoring in Writing – Fall, 2012



## REFERENCES

- **Dr. Alan Craig**, Research Scientist at the NCSA, University of Illinois at Urbana-Champaign, a-craig@ilinois.edu.
- **Dr. Simona Buetti**, Professor/Researcher, University of Illinois at Urbana-Champaign, sbuetti@gmail.com.
- **Dr. Alejandro Lleras**, Professor/Researcher, University of Illinois at Urbana-Champaign, alejandrolleras@gmail.com.