

## Education

### University of California - Los Angeles

(expected) 2013 - 2017

B.S. Computer Science, Minor in Cognitive Science

GPA: 3.38

\* = In Progress

#### Relevant Coursework:

- Operating Systems (CS 111)
- Algorithms & Complexity (CS 180)
- Programming Languages (CS 131)
- Artificial Intelligence (CS 161)
- Data Mining (CS 145)
- Neural Networks (Psych 186B)
- Machine Learning (Coursera)
- \* Computer Networks (CS 118)
- Logic Design of Digital Systems (CS M51A)
- Computer Systems Architecture & Digital Design (CS M151AB)
- Linear Algebra & Discrete Structures (Math 33A & 61)
- Mathematical Modeling and Methods (CS 170A)
- Formal Languages and Automata Theory (CS 181)
- Phonetics & Phonology (Ling 103 & 120A)
- Entrepreneurship & Product Strategy (Engr 112 & 113)
- Advanced Game Development for Virtual Reality (CS 188)

#### Extracurricular Activities:

- UCLA Archery | MentorSEAS | ACM - AI & VR/CG | Cog. Sci. Student Assoc. | Unity Instructor | Hacker Fund

## Experience

### Escality, LLC

Aug 2016 -

**Co-Founder & CEO** - [escalitygames.com](http://escalitygames.com)

- Managing the development of interactive VR experiences.
- Using the HTC Vive and Unity VRTK SteamVR C# plugin for Unity to manage Vive input and functionality.

### Unity Technologies

June - Aug 2016

**Research Consultant** - [unity3d.com](http://unity3d.com) | Dr. Diana Ford

*Virtual Reality Guided Narrative Techniques*

- Implemented a C# neural network algorithm that activates predictive cues which grab the player's attention in VR.

### UCLA Perceptual Processing Lab

June 2016 - May 2017

**Research Assistant** - [zililab.psych.ucla.edu](http://zililab.psych.ucla.edu) | Dr. Zili Liu

*Environmental Vertical Illusion in Virtual Reality*

- Developed a VR experiment in Unity investigating the oculovestibular illusory perception of tilted rooms.

### UCLA Rissman Memory Lab

June 2015 - May 2017

**Research Assistant** - [rissmanlab.psych.ucla.edu](http://rissmanlab.psych.ucla.edu) | Dr. Jesse Rissman

*Avatar Learning in Virtual Environments*

- Maintained data for investigating the cognitive and neural mechanisms of learning and memory in VR.

## Projects

### DodgeLodge

Apr 2016

- Full-body VR dodging game, built using Unity's Kinect & Leap Motion APIs to track body joints.
- Top Ten Hack, at LA Hacks 2016.

### WalkVR

Oct 2015

- Walking-in-place VR experience, built on UE4.
- Used Myo's Lua SDK to trigger artificial walking based on leg acceleration and gyroscopic data.

### Hartbeat

Sept 2014

- Heart rate-based FPS demo, built using UDK and an Arduino optical heart rate sensor used to dynamically vary the in-game bullet spread.

### FindAR

Aug 2014

- AR application using an Oculus Rift and a webcam to facilitate real-world search.
- Used OpenCV to apply color isolation filters for finding lost objects & to perform facial recognition.
- First Place & Top Oculus Hack at Hero Hacks and a Devpost Staff Pick.

## Conference Presentations

(Complete list on my CV @ [imatv.me](http://imatv.me))

#### **The Method of Loci Revisited: Virtually Augmented Memory Palaces** (2017).

Reggente, N., Essoe, J. K.-Y., Baek, H. Y., Ohno, A. A., **Vuong, A. T.**, Rissman, J.

Mnemonic Mechanisms of Mental Navigation. Symposium, International Convention of Psychological Science.

#### **Making VR Learning "Stick": Contextually Supported Transfer and Long-term Retention** (2017).

Essoe, J. K.-Y., Reggente, N., Baek, H. Y., Ohno, A. A., Mehta, P., **Vuong, A. T.**, Rissman, J.

Virtual Reality Clinical Neuroscience. Symposium, Society for Brain Mapping & Therapeutics Annual World Congress.

#### **Essential Algorithms for Creating Guided Narrative VR Experiences** (2016).

Ford, D., Lindberg, T., Mirand, A., Gorczycki, H., **Vuong, A. T.**, Cam, C., Waz, A., Herndon, M.

VR Guided Narrative Demo, *Busking for Change*, Unity Technologies, SIGGRAPH Anaheim.

#### **Does Presence/Immersion Confer an Advantage in Learning in Virtual Reality?** (2016).

Ohno, A. A., Baek, H. Y., Mehta, P. S., Yu Villa, J., Hughes, G. M., **Vuong, A. T.**, Reggente, R., Essoe, J. K.-Y., Rissman, J.

Stanford Undergraduate Psychology Conference & UCLA URW. Outstanding Poster Award.

## Skills

\* = Most Experience In

**Languages:** \*C#, \*Matlab, C, C++, Python, Java, R, Bash/Shell, SQL, HTML/CSS

**Tools:** \*Unity, UE4, UDK, \*Git, SVN, Visual Studio, OpenCV

**Hardware/Data:** \*HTC Vive, Oculus Rift DK1/DK2, Leap Motion, Arduino, Raspi, fMRI, DTI, EEG