

## willy nolan

---

Los Angeles, CA 90048  
E: willy@willynolan.com

### Interests

- Sound synthesis
- Pop culture of the 1980s
- Travel

## experience

---

### Software Engineer

The Madison Square Garden Company (MSG)  
Los Angeles, CA. May 2018 - Present

Develop simulation and visualization software for multiple platforms including multiple VR environments.

Research and create technical solutions for the new MSG Sphere venue.

Maintain large, legacy code bases and provide direct support to users.

Implement algorithms and new techniques in code.

### Software Engineer

Obscura Digital (Acquired by MSG)  
San Francisco, CA. June 2015 - May 2018

Engineered software for some of the biggest interactive installations and audio-visual events in the world.

Developed math-intensive computational photography and video projection software.

Managed the development of a variety of software applications in multiple languages.

Worked to improve documentation and software development practices.

### Software Engineer

Madrone Studios  
San Francisco, CA. March 2014 - June 2015

Designed and developed large-scale visual and interactive installations locally and internationally.

Created custom user-facing applications on short timelines.

Provided technical guidance during concept design and content creation.

### Software Engineer

NightWalker Clothing  
Portland, OR. August 2013 - March 2014

Wrote the entire codebase for the company's flagship MEAN stack application.

Handled all application deployment, monitoring and maintenance.

Established code best practices and documentation guidelines for a software development team.

## skills

---

### Software

Python  
Javascript  
C++ and C#  
OpenGL and WebGL  
HTML and CSS

### Applications

TouchDesigner  
Unity  
Git

### Other

All operating systems and shells  
Networking, protocols and data formats  
High-end graphics cards and projectors

## education

---

### M.S. Computer Science

Georgia Institute of Technology, 2020

Specialization in Computational Perception and Robotics.

Studied machine learning and computer vision as it applies to robotics, signal processing, finance and art.

### M.S. Journalism

The University of Southern California, 2013

Specialization in Broadcast and Digital Journalism.

Made extensive use of web technologies for journalism.

### B.S. Communication Studies

Portland State University, 2010

Studied social media and web technologies and how they relate to communication.

## projects

---

- Show control system at AT&T Stadium
- Social Canvas at MGM Cotai
- Video projections at Shantou University

These and other projects and research that can be shared publicly are documented at [willynolan.com](http://willynolan.com)