

Zachary Rubin

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2610 East Union St.
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EDUCATION

Ph.D. in Computer Engineering

University of California, Santa Cruz

Graduation: March 2017

Relevant coursework: **human-computer interaction, user experience for interactive design, natural language processing, computer security, computer architecture**, distributed networks, parallel processing

Bachelor of Arts in Computer Engineering

Minor in Computer Science

Rose-Hulman Institute of Technology

Graduation: February 2011

Relevant coursework: **digital signal processing, computer security, OpenGL programming, computer architecture**, algorithms, digital design

WORK EXPERIENCE

Electronics Director

Exit Reality

December 2016 - December 2017

- Designer of electrical internals for VR arcade booths.
- Developed interactive and reactive LED experiences.
- Prototyped mixed reality experiences.
- Ensures certification of parts, redesigns as needed.
- Manages supply chain for bulk electronic materials.
- Manages hardware and software engineers.

Chief Technology Officer

Digital Pheromones LLC

October 2013 - Present

- Coordinates a team of engineers and artists that develop products merging art and science.
- Builds and maintains relationships with companies to design and fabricate electronics for wearables.
- Directs hardware and software prototyping.
- Performs all duties related to design for manufacture
- Ensures FCC testing and certification of products.
- Directed the design of the Songbird Ocarina of Light
- Director of development for a proximity sensing wearable. Currently pending FCC Certification.

Owner

Zohii Consulting

January 2012 - Present

- Personal company for web and mobile contracting
- Performs all duties related to business ownership

SKILLS

UX, HCI, Instruction, Research and Development, Game Design, Audio Engineering, Prototyping, Computer Security, Reverse Engineering, Project Management, 3D Printing, Design for Manufacture, Human Resources

LANGUAGES AND TOOLS

Unity, C#, Objective-C, C, C++, Python, Swift, Java, PHP, SQL, HTML, **Adobe Photoshop, Audacity, Eagle, XCode, Github, Arduino**, Atmel Studio, Visual Studio

SPEECH PROJECTS

Speech Technology Lead

Sayin' It Sam

September 2017 - Present

- Redesigned a mobile speech recognition engine for real-time game input by reducing input delay tenfold.
- Negotiated contracts with different SR companies and ensured COPPA compliance.

Chief Technology Officer

Kathryn's Reading Program

January 2017 - December 2017

- Developing educational software to improve literacy instruction to underprivileged children in the U.S.
- Designed the system in web allowing offline play
- Ensures compliance of game with U.S. schools
- Converting reading curriculums for children aged 3 and older into speech recognition, interactive instruction, and games.
- Speech recognition tracks errors and provides cueing systems to aid children in saying the word.

Graduate Researcher: HCI for Speech

Speech with Sam

December 2011 - December 2017

- Developed a real-time offline mobile speech recognition engine capable of detecting mispronunciations related to speech impairments.
- Embedded the system into a game and deployed the app to children and developmentally disabled adults; producing increases in therapy performance.
- Coordinated a team of undergraduates, graduates, and doctors into a video game research and development team.
- Awarded a \$2 million NSF grant in 2015