Salina Ortega

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Education

2015–2018 **University of Illinois at Urbana-Champaign**, *Major: Computer Science, Minor: Math*.
Courses: Production Computer Graphics, Interactive Computer Graphics, History of Animated Media, Virtual Reality, Intro to Deep Learning, Linear Algebra, Data Structures (Honors), Database Systems, Algorithms and Methods of Computation, UI Design

Work Experience & Projects

July 2019 – present **Software Engineer**, The Walt Disney Company - EMERGE Technology Development Program.

Jan. 2020 – present **Software Engineer**, Disney TV Animation (DTVA), Glendale, CA.
- Adapted a legacy storyboarding/sketching iOS application for use in DTVA's environment. Involved adding Swift components and creating micro-services and workstation agents in Python.
- Applied custom filters to DTVA's instance of the image processing tool FFmpeg, written in C++.
- Porting an existing web application, which submits render jobs to TVA's render queueing system, from Karrigell to Flask.

July 2019 – Jan. 2020 **Software Engineer**, Enterprise Tech, Burbank, CA.
- Designed and built the Render As A Service app, which allows users to run Renderman jobs on an external server by reconfiguring project files and executing Tractor commands. Written in Vue and Go.

Apr. 2020 – present **Independent Project**, Memory Palace.
- Creating this VR exploration of a user's photo library. Images are projected into 3D space according to date and location, and are continuously re-sampled to make the experience dynamic.
- Made with Unity, scripts written in C#.

Oct. 2019 – Jan. 2020 **Independent Project**, PopUpPodcast.
- VR experience that places user in a library, where each book corresponds to an episode of the podcast StoryCorps. Upon opening a book, audio from the episode is played and an animation of the story pops out of the book.

Aug. 2018 – Nov. 2018 **Independent Project**, Ray-Tracer.
- Programmed a ray-tracer from scratch in C++ to render images in 3D space.
- System supports orthographic and perspective projection, antialiasing, shadow calculation, and the Phong reflectance model.

May 2018 – Aug. 2018 **Software Engineering Intern**, The Walt Disney Company - ABC TV Group, Burbank, CA.
- Ingested external data into the ABC content database using Java, Python, and AWS services. This scalable system delivers personalized news content to users through the ABC mobile app.
- Communicated with team members in order to efficiently facilitate bug fixes for the DisneyNow Fire TV and Android TV apps.
- Shadowed software engineer at Walt Disney Animation Studios, learned about render queuing system.

Oct. 2017 – Dec. 2017 **Project Lead**, VR Horticulture Simulator.
- This virtual exploration of UIUC's plant conservatory combines a 360 stereoscopic video with interactive UI elements.
- Setup video backgrounds, wrote C# scripts to manage interactions with the environment, and modeled informational plant cards.

Aug. 2015 – Oct. 2017 **Research Team Lead**, Society of Women Engineers (SWE) Team Tech subcommittee.
- Developed an automatic hitching system for John Deere, which allows tractor operators to hitch implements to their vehicles without leaving their seats.
- Built a Raspberry Pi prototype which utilized sensor input and triangulation methods to navigate autonomously. Also led the graphics and displays team, which built a Pygame system.

June 2017 – Aug. 2017 **Software Engineering Intern**, John Deere - Heat Treat, Manufacturing (IT), Waterloo, IA.
- Created an internal web based data management tool. Conferenced with engineers to identify deliverables.
- Architected the database structure, designed the UI, and set up the back-end.

Apr. 2017 – May 2017 **Independent Project**, Particle Simulator.
- Used WebGL to model a 3D particle system which implements the forces of gravity and drag.
- Wrote a Blinn-Phong shader for this project.

Skills

Programming Languages: C++, Python, Swift, C#, HTML, CSS, JavaScript, C

Platforms/Technologies: Unity, Autodesk Maya, Blender, WebGL, OpenGL, Renderman, Adobe Premiere, AWS Lambda, Amazon SQS, Amazon Cognito, AWS S3, Vue.js

Activities

Sept. 2017 – May 2019 **Women in Computer Science (WCS) Mentoring Committee**.
- Organized membership enrichment events, including technical workshops, lean-ins, and diverse panels of students, educators, and professionals, to aid students in navigating their academic and professional pursuits.

Aug. 2017 – May 2019 **CS Supported Study Hall Tutor**.
- Assisted students in learning key computer science concepts for Data Structures, Discrete Structures, and other courses.

Honors & Awards

2017 SWE Team Tech National Competition Winner.
- Was awarded 1st place for the SWE Team Tech project (described above) for this national collegiate competition.

2017 Disney: Tech Behind the Magic Experience.
- Scholarship covered attendance to the 2017 Grace Hopper Celebration, the largest women's technology conference in the world. Also involved exposure to innovative tech used by Disney. Criteria included technical aptitude and commitment to diversity.