Natalie O'Leary

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EDUCATION:

University of Southern California **Sept. 2021 – Present**

Master's in Computer Science: Multimedia and Creative Technologies

Princeton University, Princeton NJ **Sept. 2017 – May 2021**

Bachelor of Art in Computer Science, Minor in Musical Theater, GPA: **3.62**

RELEVANT EXPERIENCE:

Research Assistant, University of Southern California **Sept. 2021 – Present**

- Working with a small team of researchers to create a graphical representation of polyculture agroecosystems
- Using computer graphics to compute optimal plant configuration given light and canopy conditions
- Working with 3 other graduate students and Prof. Barath Raghavan

Center Director, Code Wiz Westford **May 2021 – Aug 2021**

- Handled class and camp registration for over 300 new and returning students
- Supervised in-person kids at camp from 9-5, acting as both an administrator and a teacher
- Handled safe pickup and drop off of the kids, following COVID safe protocols

Teaching Assistant, Computer Science Dept. Princeton University **Jan. 2019 – May 2021**

- Give supplementary instruction on course material for 3 introductory CS courses
- Help students understand assignments and assist in debugging
- Grade assignments of over 100 students in Computer Science courses at Princeton University each week with other graders
- Check the work of around 8 other graders weekly to ensure fair and consistent grading

AWS Cloud Intern, National Oceanic and Atmospheric Administration **Jun. 2020 – Aug. 2020**

- Transferred 120 TB of climate data to the cloud
- Set up cloud computing through JupyterHub and ran analysis scripts on the cloud data
- Granted access to the data across Amazon AWS accounts to GFDL and ESGF administrators
- Worked in collaboration with the NOAA, ESGF and GFDL through Princeton's CIMES program

RESEARCH:

Simulating Compelling Bioluminescence in Ocean Waves **Sep. 2020 - Present**

- Researching differential equations to represent bioluminescent light patterns in Houdini
- Creating large scale ocean simulations with bioluminescent particles dispersed throughout
- Recreating the touch-based activation of the bioluminescence in simulation

Investigating Inter-Agent Communication and Learning in Rocket League **Jan. 2020 – May 2020**

- Utilized the RLBot framework to make artificially intelligent rocket league bots
- Created 3 different types of bots with varying degrees of learning and communication
- Tested these bots against other publicly accessible rocket league bots

SKILLS:

Computer: Maya, Houdini, Java, C, Python**,** Go, SQL, HTML, Javascript, JupyterHub, AWS, JQuery, Microsoft Office**,** Adobe Creative Cloud (Illustrator, Photoshop, After Effects, Animate)**,** Latex
Language: French (fluent), American Sign Language (proficient)