

# Jared Knofczynski

TECHNICAL ARTIST & PH.D. STUDENT

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## Education

BACHELOR OF SCIENCE (HONORS) IN MATHEMATICS AND COMPUTER SCIENCE, MINOR IN MUSIC TECHNOLOGY.

March 2022

## Skills

**Design** 2D (Adobe Photoshop & Illustrator), 3D (Blender, Maya), **Game** Design (Unity), **Texturing** (Substance Painter & Designer)  
**Technical Art** Shader development for Unity. **Python scripting** for Blender automation. Model **Rigging, Animation**, and **UV Mapping**.  
**Programming** Python, C#, C++, HTML/CSS, JavaScript, Bash, SQL  
**Audio** Audacity, Ocenaudio, Ableton, Logic Pro, Max/MSP, PureData

## Experience

### Independent Technical Artist

FREELANCE

Apr. 2020 - Present

- Worked independently and with small teams of developers to design technical art solutions for the Unity game engine.
- Served as the design and technical lead for several small shipped indie titles during this time, including *INHUMAN RESOURCES* (linked below).

### Internet Data Science Researcher

Eugene, OR

OREGON NETWORK RESEARCH GROUP, UNIVERSITY OF OREGON

Nov. 2020 - Jun. 2022

- Conducting machine learning research for networking applications using deep-learning frameworks such as PyTorch, Keras, and Tensorflow.
- Published "ARISE: A Multi-Task Weak Supervision Framework for Network Measurements" in a peer-reviewed journal (*IEEE JSAC*) in July 2022.

### Learning Assistant & Student Ambassador

Eugene, OR

UNIVERSITY OF OREGON DEPARTMENT OF COMPUTER SCIENCE

Oct. 2019 - Mar. 2022

- Worked with a team of undergraduate researchers and faculty from the Oregon Health & Science University to create a computational modeling framework intended to simulate the transmission of airborne pathogens (i.e., COVID-19) in academic settings.
- This research was conducted as part of the *altREU* program at Portland State University and the results were published in their library archive.

### Undergraduate Researcher

Portland, OR

TEUSCHER LABS, PORTLAND STATE UNIVERSITY

Jun. 2020 - Aug. 2020

- Worked with a team of undergraduate researchers and faculty from the Oregon Health & Science University to create a computational modeling framework intended to simulate the transmission of airborne pathogens (i.e., COVID-19) in academic settings.
- This research was conducted as part of the *altREU* program at Portland State University and the results were published in their library archive.

### Technical Art Instructor; Assistant Camp Director

Portland, OR

ID TECH

Jun. 2019 - Aug. 2020

- Taught computer science and digital art concepts to high school students both remotely and in a summer camp setting.
- Also acted as Assistant Director for one season, helping oversee daily operations and lead other instructors in preparing lesson plans.

## Projects & Publications

### Virtual Tabletop (2022)

Independently developed a web-based ASCII grid with support for player input and custom maps for use in various tabletop role-playing games.

### A Multi-Task Framework for Network Measurements (2022)

Designed and implemented a multi-task machine learning framework for classifying time-series network data, built with PyTorch and Snorkel. Findings published in *IEEE Journal on Selected Areas in Communications*, July 2022.

### INHUMAN RESOURCES (2021)

Final project for CIS 410 Game Design – a short game made in Unity with an emphasis on physics, art, and sound design. I was responsible for implementing gameplay logic, as well as environment and sound design. Source code available at [github.com/j-red/Inhuman-Resources](https://github.com/j-red/Inhuman-Resources).

### Combating COVID on College Campuses (2020)

An agent-based modeling framework designed in collaboration with faculty from the Oregon Health & Science University to simulate the transmission of airborne pathogens in academic settings. Findings published in Portland State University's online library archive.

Additional reference information available upon request.