Jared Knofczynski

TECHNICAL ARTIST & PH.D. STUDENT

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Education

Bachelor of Science, Mathematics and Computer Science. Minor in Music Technology. University of Oregon, March 2022.

Skills

Technical Art	**Shader development** for Unity. **Python scripting** for Blender/Maya. Model **Rigging**, **Animation**, and **UV Mapping**.
Programming	**Python**, **C#**, and **C++**. Web languages such as **HTML** and **JavaScript**. Scripting languages such as **Bash** and **SQL**.
Design Tools	**2D** (Adobe Photoshop, Illustrator), **3D** (Blender, Maya), **Game Design** (Unity, Unreal), **Texturing** (Substance Painter).

Experience

Independent Technical Artist

Remote

Freelance — Apr. 2020 - Present

- Working independently and with small teams of developers to implement artistic solutions in the Unity game engine.
- Design and technical lead for several small indie titles, including *INHUMAN RESOURCES* (linked below).

Internet Data Science Researcher

Eugene, Oregon

Oregon Network Research Group, University of Oregon — Nov. 2020 - Jun. 2022

- Conducted machine learning research for networking applications using the PyTorch, Keras, and TensorFlow deep-learning frameworks.
- Findings published in the IEEE Journal on Selected Areas in Communications, July 2022.

Learning Assistant & Student Ambassador

Eugene, Oregon

Department of Computer Science, University of Oregon — Oct. 2019 - Mar. 2022

- Tutored and provided additional instruction to undergraduate students in introductory computer science courses.
- Served as an ambassador between prospective future students to provide insight into the lives of current computer science students.

Assistant Camp Director & Technical Art Instructor

Portland, Oregon

iD Tech — Jun. 2019 - Sep. 2020

- Oversaw daily operations in camp activities and led team members in preparing lesson plans.
- Provided instruction in several STEAM disciplines, including programming, video editing, 3D modeling, and more.

Undergraduate Researcher

Portland, Oregon

Teuscher Labs, Portland State University — Jun. 2020 - Aug. 2020

- Worked with a team of three other undergraduate researchers and faculty from the Oregon Health & Science University to simulate the transmission of airborne pathogens (i.e., COVID-19) via an agent-based modeling framework.
- This research was conducted as part of the *altREU* program at Portland State University in Summer 2020. The results were published in the PSU Online Library Archive.

Projects & Publications

NDS Model Extractor (2022)

A set of Python scripts for Blender to automate the extraction and cleanup of 3D models found in game files for the Nintendo DS.

A Multi-Task Framework for Network Measurements (2022)

A state-of-the-art deep learning framework for classifying time-series network data, built with PyTorch and Snorkel. Findings from this project were published in the *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.

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 project and reference information available upon request.