

## SKYLAR WOLFGANG WURSTER

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### RESEARCH INTEREST

Computer graphics, machine learning, deep learning, real-time graphics, virtual reality, data visualization

### EDUCATION

Ohio State University

**PhD student in Computer Science**

**In progress**

Areas of focus: Data visualization and machine learning

Ohio State University

**Bachelor of Science in Computer Science and Engineering**

**2019**

Areas of focus: Computer graphics

Magna Cum Laude

### EMPLOYMENT

The Hiatus System, Columbus Ohio

**Co-founder, computer engineer**

**January 2018 – present**

Developed a mobile VR application utilizing a custom belt to track breath to teach mindfulness-based stress relief tactics.

Ohio State University, Columbus Ohio

**Graduate Teaching Assistant – Computer Science and Engineering**

**August 2019 – present**

Ohio State University, Columbus Ohio

**Research Assistant – Advanced Computing Center for the Arts and Design**

**January 2017 – May 2019**

Developed Unity applications concerned with virtual reality, mixed reality, augmented reality for use in the healthcare and veterinary fields.

Ohio State University, Columbus Ohio

**Grader – Computer Science and Engineering**

**January 2019 – May 2019**

Graded student's projects and reviewed curriculum for CSE 5912, a capstone game development course.

United Airlines, Chicago Illinois

**Contact Center IT Intern – Computer Science and Engineering**

**January 2019 – May 2019**

Developed machine learning models for predicting why a customer would be calling and for pulling information from handwritten baggage claim reports.

Discovery Lab Global, Dayton Ohio

**Research Intern and Peer Advisor**

**August 2016 – January 2017**

Designed 3-week classes to be taught to interns in Discovery Lab Global each year.

Created tools for an NSA funded project to teach cybersecurity to veterans and active duty servicepeople.

Air Force Research Laboratory's Discovery Lab, Dayton Ohio

**Research Intern and Liaison**

**July 2015 – December 2015**

Team lead of 13 to create a virtual replication of Air Force One with an AI guided tour.

Created a web application for search and rescue missions.

### AWARDS

First place at a Microsoft coding contest at OSU

September 27, 2017

Humane Technologies Fellow

August 2017 – May 2018

National Buckeye Scholarship

August 2015 – May 2019

Provost Scholarship

August 2015 – May 2019

### TEACHING EXPERIENCE

Dundee Crown High School

**Tutor – Advancement Via Individual Determination (AVID)**

August 2014 – May 2015

Tutored students in grades 9<sup>th</sup> – 12<sup>th</sup> on classes focused on math, such as geometry, algebra, pre-calculus, calculus, and physics.

The Ohio State University

**Graduate Teaching Assistant**

August 2019 – May 2020

Training for and teaching CSE 2221: Software 1, an introduction to software engineering.

## RESEARCH

The Ohio State University

**Undergraduate researcher**

January 2016 – December 2016

Researched maze generation algorithms with user constraints inside of Unity.

Ohio State University, Columbus Ohio

**Research Assistant – Computer Science and Engineering**

May 2019 – August 2019

Developing machine learning models and visualizations for breast cancer detection augments with radiologist input.

## PUBLICATIONS, PRESENTATIONS, AND PAPERS

Skylar W. Wurster, Arkadiusz Sitek, Jian Chen, Karla Evans, Gaeun Kim, Jeremy M. Wolfe. *Human Gist Processing Augments Deep Learning Breast Cancer Risk Assessment*. *arXiv*, 1912.05470. 2019.

Bruggeman, K. & Wurster, S. W. 2018. *The Hiatus System: virtual healing spaces: low dose mindfulness based stressed reduction virtual reality application*. *SIGGRAPH '18 ACM SIGGRAPH 2018 Appy Hour*. 8.

Wurster, S. W. 2016 *Generating and Creating Perfect-Mazes in Unity*. *Denman Undergraduate Research Forum*.

Paul Hyunjin Kim, Jacob Grove, Skylar Wurster, and Roger Crawfis. 2019. *Design-centric maze generation*. In *Proceedings of the 14th International Conference on the Foundations of Digital Games (FDG '19)*. ACM, New York, NY, USA, Article 83, 9 pages.

doi: [doi.org/10.1145/3337722.3341854](https://doi.org/10.1145/3337722.3341854)

VIS2019 - Presented on behalf of Junpeng Wang: J. Wang, S. Hazarika, C. Li and H. Shen, "Visualization and Visual Analysis of Ensemble Data: A Survey," in *IEEE Transactions on Visualization and Computer Graphics*, vol. 25, no. 9, pp. 2853-2872, 1 Sept. 2019.

doi: 10.1109/TVCG.2018.2853721. <https://vimeo.com/373017114>

VIS 2019 - Presented on behalf of Ko-Chih Wang: K. Wang, T. Wei, N. Shareef and H. Shen, "Ray-based Exploration of Large Time-varying Volume Data Using Per-ray Proxy Distributions," in *IEEE Transactions on Visualization and Computer Graphics*.

doi: 10.1109/TVCG.2019.2920130. <https://vimeo.com/375028920>

## GRANT FUNDING

**Chronic Brain Injury Pilot Award via Discovery Themes at Ohio State University**

OSU Research Grant - \$50,000

**SIGGRAPH Travel Grants**

Multiple OSU travel grants for SIGGRAPH 2018 and 2019 - \$6000