cpsiff.github.io
/in/cpsiff
/cpsiff

CARTER SIFFERMAN

Madison, WI
sifferman@wisc.edu
(417) 234-1832

Research Interests

Computer Vision, Computational Imaging, Robot Sensing, Computer Graphics

Education

2020-Present **University of Wisconsin – Madison: PhD Computer Science**

2020-Present **University of Wisconsin – Madison: M.S. Computer Science (Expected Dec. 2022)**

Graduated 2020 **Drury University: B.S. Computer Science**
Minor: Mathematics | GPA: 3.99

Experience

2020-Present **Graduate Teaching Assistant**
University of Wisconsin – Madison
- Computer Graphics (Fall 2021, Spring 2022)
- Grader for Computer Vision (Fall 2021)
- Intro to Programming (Fall 2020, Spring 2021)

Summer 2021 **Graduate Research Assistant: Visual Computing Lab**
University of Wisconsin – Madison
- Created, implemented, and tested a novel method that enables recovery of 5D pose (extrinsic calibration) of a single-pixel distance sensor attached to robot arm
- Implemented and tested nonlinear optimization model that enables method
- Empirically characterized various time-of-flight distance sensors

Summer 2021 **Research Mentor**
Summer STEM Institute | Remote
- Stanford-based startup for data science education
- Mentored research with two students, hosted office hours, gave guest lecture

Summer 2019 **NSF Research Experience for Undergraduates**
University of Missouri – Columbia
- Developed integrated system for collection of depth video
- Adapted action recognition neural network to newly gathered field data

Summer 2018 **Software Intern**
Cerner | Kansas City, MO
- Created web interface with React to replace desktop-based physician portal

Publications

RA-L / IROS 2022 **C. Sifferman**, D. Mehrotra, M. Gupta, M. Gleicher. Geometric Calibration of Single-Pixel Distance Sensors.

IEEE BIBM 2019 Z. Moore, **C. Sifferman**, S. Tullis, M. Ma, R. Proffitt, M. Skubic. Depth Sensor-Based In-Home Daily Activity Recognition and Assessment System for Stroke Rehabilitation.

Selected Achievements / Awards

2021 CS Departmental Summer Research Assistantship (UW-Madison)

2020 CS Departmental First Year Scholarship (UW-Madison)

2019 Phi Kappa Phi Honor Society (Drury University)

2017 Judge Warren White Scholarship (Drury University)

2017 Outstanding Freshman in Computer Science (Drury University)

Mentoring

2021 Dev Mehrotra | Characterization and Development of SPAD-Based ToF Sensors

2021 Katrina Chung | Satellite Imagery for Crop Yield Prediction
(Summer Stem Institute Distinguished Project Winner)

2021 James Heron | Renewable Energy Prediction via Remote Sensing Data

Other Service

2018-2020 Volunteer Tutor – Discrete Math and Data Structures

2019 Volunteer Referee – FIRST Robotics Competition

2017-2020 New Student Orientation Leader – Drury University

Skills

Programming: Python (NumPy, Pandas, PyTorch), Java, Dart, MATLAB, GAMS

Web: JavaScript (React, Three.js), HTML, CSS, WebGL

Tools: Unix, Git, LaTeX, Docker, Photoshop, Illustrator