STANLEY NICHOLSON

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EDUCATION

Illinois Institute of Technology (IIT) *August 2020 – May 2023*
– Bachelor and Master of Science in Applied Mathematics GPA: 4.0/4.0
– Minors in CS and Bioinformatics
– Camras Scholars Program

University of Wisconsin-Parkside (UWP) *September 2018 – May 2020*
– Early College Credit Program GPA: 4.0/4.0

Lakview Technology Academy *September 2016 – May 2020*
– Valedictorian GPA: 3.92/4.0

EXPERIENCE

Researcher in Bridge-Pedestrian Dynamics *June 2021 – Present*

- Developed a coupled bridge-pedestrian dynamics model with pedestrian traffic model under supervision of Dr. Igor Belykh at Georgia State University
- Analyzed and reviewed current literature for methods to both create and curate model
- Communicated and collaborated with three other REU participants along with P.h.D. students and researchers

Researcher in Stochastic Modeling *September 2020 – June 2021*

- Applied stochastic modeling to transcription factor regulation with Dr. Jinqiao Duan at IIT
- Awarded $500 RES-Match grant from the Pritzker Institute of Biomedical Science and Engineering
- Utilized machine learning algorithms (normalizing flows) via **pytorch** to analyze noisy high-dimensional data under supervision of Dr. Romit Maulik at Argonne National Laboratory
- Collaborated with two other graduate students and researchers at IIT and Argonne National Laboratory
- Presented work at Symposium for Undergraduates in the Mathematical Sciences (SUMS) conference at Brown University on March 14, 2021

Developer for Single Cell RNA Data Visualizer *June 2020 – September 2020*

- Designed early stages of single cell RNA-sequence data visualizer with Dr. Natalia Maltsev at the University of Chicago
- Employed **pandas**, **numpy**, **plotly**, **dash**, **chart.js**, and **d3.js** to implement online web app for RNA expression data exploration, investigation, and analysis

Lead Programmer for Underwater Robotics Team *September 2018 – March 2020*

- Designed drive program with **pygame**, computer vision using **opencv** and machine learning, network communication between on-surface and robot Raspberry Pi's through **socket**
- Taught and mentored 5 underclassmen to inherit and develop robot programming systems

Bacteriophage Research Project *September 2018 – February 2019*

- Researched effect of temperature on bacteriophage infectivity in *Mycobacterium smegmatis* under guidance of Carthage College professor
- Presented poster in biology project fair

TECHNICAL SKILLS

Python (4.5 years), LaTeX(3 years), HTML/CSS/JS (2 years), Java, C# (1 year), MATLAB, SQL (1 year)

EXTRACURRICULAR

President of the Machine Learning Club at IIT *August 2021 – Present*

- Organize and lead executive board meetings for 200-sized person club and 5 guest lectures and workshops