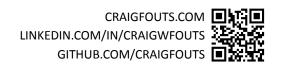
# Craig Fouts, MSc



#### **EDUCATION**

## Columbia University, MSc

Applied Mathematics 2022 – 2023

Completed a **graduate research internship** in the Tech Innovation Lab at the New York Genome Center.

PI: Sanja Vicković & Bianca Dumitrascu

# The Ohio State University, BSc

Computer Science & Mathematics 2018 – 2022

Received **honors research distinction** for research and publication completed with Google Research.

PI: Tanya Berger-Wolf

#### **EXPERIENCE**

# Uppsala University – Department of Immunology, Genetics, and Pathology

Machine Learning Engineer

Oct 2024 - Present

Developing mathematical models and statistical machine learning tools to facilitate genomics research using single-cell and spatial transcriptomics data.

Proficiencies: Python (PyTorch, Pyro, Scikit-Learn), statistical modeling, probabilistic machine learning

# New York Genome Center – Technology Innovation Laboratory

Associate Computational Biologist II

Feb 2024 - Sep 2024

Graduate Student Research Intern

Sep 2022 - Dec 2023

Developed a probabilistic clustering model for elucidating cell state mixtures associated with degenerative neuromuscular diseases using single-cell spinal data.

Proficiencies: Python (PyTorch, Pyro, Scikit-Learn), statistical modeling, probabilistic machine learning

#### The Ohio State University – Translational Data Analytics Institute

Student Research Assistant

Aug 2021 – Sep 2022

Developed a computational pipeline for performing aggregation and time-series analysis of multimodal data collected to study the effects of combustion engines on urban environments.

Proficiencies: Python (PyTorch, Scikit-Learn, Scipy), time series alignment & analysis

## The Ohio State University – Driving Simulation Laboratory

**Laboratory Researcher** 

Aug 2020 - Sep 2022

Proctored simulated driving psychology experiments and developed a graphical software platform for interfacing with our proprietary data analysis and networking systems.

Proficiencies: Python (PyQt, QTrio, Socket), experimental research, graphical software development

#### The Ohio State University – Center for Design and Manufacturing Excellence

Student Research Assistant

Nov 2018 - Aug 2019

Developed a graphical software platform for interfacing with a Universal Robots UR10e industrial arm used to automate surveys of radioactive sources in a controlled environment.

Proficiencies: Python (RoboDK, Tkinter), graphical software development, robotics automation

## **PUBLICATIONS**

# **Growing Steerable Neural Cellular Automata**

Ettore Randazzo, Alexander Mordvintsev, Craig Fouts

Artificial Life Conference 2023

# **Growing Isotropic Neural Cellular Automata**

Alexander Mordvintsev, Ettore Randazzo, Craig Fouts

OMEA Solo & Ensemble: Rank 1 Class A Violin Solo Performance

Artificial Life Conference 2022

2016 & 2017

#### **ACCOLADES**

## **Competitions**

HackOHI/O Hackathon:1st Place Grand Prize, Microsoft Challenge Winner, People's Choice Award2021Ohio State FEH Honors Robotics Competition:2nd Place Outstanding Achievement in Innovation2019

# **Scholarships**

Battelle Memorial Institute Full Tuition Award, Honors Engineering Research Award, Ohio State Maximus Award, Ohio State Mankoff Engineering Award, Raymond H. and Beryl Dean Penick Memorial Scholarship

## **COURSEWORK**

Columbia University	
Applied Statistics III (A), Machine Learning for Functional Genomics (A), Advanced Linear Algebra (A+)	2023
Numerical Algebra & Optimization (A), Partial Differential Equations (A-)	2022
The Ohio State University	
Discrete Mathematical Models (A), Quantitative Neuroscience (A), Computer Networking (A)	2022
Mathematical Statistics II (A), Advanced Artificial Intelligence (A), Programming Languages (A)	2021
Data Structures & Algorithms (A), Experimental Physics (A), Intermediate Mechanics (A-)	2020
Ordinary Differential Equations (A), Honors Physics Electricity & Magnetism (A)	2019
Honors Real Analysis (A), Honors Psychology (A)	2018