Niko Zuppas

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Education

The Ohio State University, Columbus, OH (Current)
- *M.S. in Ecology, Evolution and Organismal Biology*

University of South Carolina, Columbia, SC
- *B.S. in Computer Science*

Research and Work Experience

Research Assistant, Carstens Lab | Summer 2024
- Developed population genetics simulations using SLiM 3 to test selection hypotheses
- Developed unsupervised deep learning algorithms for learning the distribution of neutral polymorphisms
- Developed a transfer learning pipeline to enable the application of learned models to undersampled species

Innovation and Commercialization Ambassador, Innovation and Commercialization Office | 2024
- Conducted inreach for faculty developing intellectual property at The Ohio State University
- Facilitated meetings to discuss the commercial application of technologies developed by researchers

Research Assistant, Carstens Lab | Summer 2023
- Collaborated in developing a grant proposal focused on employing Large Language Models for extracting taxonomic trait data from scientific literature

Research Assistant, McNair Center for Aerospace Innovation and Research | 2017-2018
- Conducted research on machine learning applications for automatic classification of twenty-one different defects in carbon fiber aerospace components, a project sponsored by NASA and Boeing
- Designed and implemented genetic algorithms to optimize machine learning parameters, achieving a 10% improvement in classification accuracy

Conference Presentations

"Detecting Selection in Non-Model Species with Deep Learning" | Ohio State University EEOB Recruitment Symposium, Columbus, OH, April 2024
- Presented research on the application of deep learning techniques to study neutral polymorphism distribution in undersampled species at a recruitment event poster symposium

Teaching Experience

Comparative Physiology | TA, The Ohio State University, 2024
- Assisted in this upper level biology course focusing on the function of major systems

Form, Function, Diversity and Ecology | Lab TA, The Ohio State University, 2023
- Assisted in majors biology course focusing on ecology and evolution

Honors and Awards
- Capstone Scholar, University of South Carolina
- McKissick Scholarship, University of South Carolina
- Junior McNair Fellow, University of South Carolina

Relevant Skills and Coursework
- Languages: Python, R, C#
- Machine learning: TensorFlow, PyTorch, OpenCV
- Coursework: Phylogenetics, Population Genetics