

# Jacob S. M. Beattie

1278 Neil Ave  
Columbus, OH, 43201

beattie.74@osu.edu  
jakesmbeattie.github.io

## Education

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**The Ohio State University, Columbus, OH**

2024 - Present

PhD in Computer Science and Engineering

Advisor: Tanya Berger-Wolf

**Iowa State University, Ames, IA**

2019 – 2023

Bachelor of Science with Honors, Mathematics

Bachelor of Science, Computer Science

*Cumulative GPA: 3.97, Major GPA: 4.0*

## Presentations and Preprints

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**Habitat-Driven Vocal Variation in Hawai’ian Birds - Poster**

*Namrata Banerji, Ekaterina Nepovinnikh, Jacob Beattie, Hikaru Keebler, Leonardo Teixeira Viotti, Amanda Navine, Patrick Hart, Mike Long, Shea Uehana, Eissas Ouk, Evan Donoso, Avery Dean, Ann Carey, Tanya Berger-Wolf, Kaiya L Provost*

CVPR

June 2025, Nashville, TN

**Utilizing Large-Language Models for Enhanced Clinical Trial Matching - Oral**

*Jacob Beattie, B.Sc., Billal Homayoun, B.Sc., Daniel Yang, M.D., Sarah Neufeld, M.Sc., MBA, Christian Chukwuma, B.Sc., Ahmed Gul, B.Sc., Dan Nguyen, Ph.D., Neil Desai, M.D., Steve Jiang, Ph.D., Michael Dobopolski, M.D.*

UT Southwestern AI Colloquium

November 2023, Dallas, TX

**Enhancing Patient Comprehension: The LLM Approach to Demystifying Clinical Trial Consent Forms - Poster**

*Jacob Beattie, B.Sc., Daniel Yang, M.D., Billal Homayoun, B.Sc., Sarah Neufeld, M.Sc., MBA, Christian Chukwuma, B.Sc., Ahmed Gul, B.Sc., Neil Desai, M.D., Steve Jiang, Ph.D., Michael Dobopolski, M.D.*

**Bridging Information Gaps for Patients in Glioblastoma Understanding through a Large Language Model Powered Medical Chatbot Leveraging NCCN Guidelines and PubMed Insights - Poster**

*Michael Dobopolski, M.D., Jacob Beattie, B.Sc., Daniel Yang, M.D., Sarah Neufeld, M.Sc., MBA, Christian Chukwuma, B.Sc., Ahmed Gul, B.Sc., Neil Desai, M.D., Steve Jiang, Ph.D., Dan Nguyen, Ph.D.*

## Information, AI, and their Applications to Card Games - Poster

Jacob Beattie, Jack Lutz, Ph.D.

Iowa State University Honors Poster Presentation

May 2023, Ames, IA

## Research Experience

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**Research Technician II**, UT Southwestern Medical Center, Dallas, TX

August 2023 – Present

PI: Steve Jiang, Ph.D.

Projects: Utilizing GPT-4 for patient matching and summarizing clinical trial consent forms.

Utilizing LLMs to create applications for use in clinical settings, aiming to increase efficiency, patient outcomes, and patient understanding.

**Undergraduate Research Assistant**, Iowa State University, Ames, IA

January 2021 – August 2021

PI: Jue Yan, Ph.D.

Project: Cell-average based neural network methods for higher-order partial differential equations

Implemented residual, convolutional, and recurrent neural network architectures in Python and MATLAB to test novel applications to PDEs. Analyzed training speed, performance, and stability of networks.

## Teaching & Mentoring Experience

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**Physics Tutor**, Iowa State University, Ames, IA

August 2021 – December 2021

- Tutored students in introductory physics concepts in both individual and group settings.
- Assisted students in learning and utilizing mathematical techniques for solving physics problems.
- Prepared and presented example problems, aiding in the learning of a wide range of phenomena.
- Addressed questions and confusion over topics presented in classroom lectures, furthering the understanding of tutees.

**Undergraduate TA**, Iowa State University, Ames, IA

Fall 2020 – Spring 2021

- Assisted in the administration of an introductory computer science course for non-majors.
- Created exams, quizzes, and lesson guides for use in the course.
- Graded assignments, quizzes, and exams, providing feedback to students on submitted work.
- Held office hours to provide students with assistance in completing their assignments and gaining an understanding of the material.

## Work Experience

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**Advanced Software Development Intern**, Kingland Systems, Ames, IA

*May 2023 – August 2023*

- Maintained and improved a proprietary application with rigorous development standards.
- Learned new technologies at a fast pace while still completing required work.
- Demonstrated clear communication, efficient time management, and decisive planning skills while working in a collaborative environment.

**Software Development Intern**, Collins Aerospace, Annapolis, MD

*May 2022 – August 2022*

- Assisted in frontend and backend development of a new proprietary application.
- Collaborated as a team to complete several development sprints, successfully meeting milestones and prior goals.

## **Honors and Awards**

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Phi Beta Kappa Honors Society Member	2022
Dean's High Impact Research Award	2022
Cardinal Key Honors Society Member	2021
Dean's List	2019 - 2023