EVAN CHUGH

(716) 481-7325
evanchugh@gmail.com

EDUCATION

- Canisius College — Buffalo, NY
  - Bachelor of Science, Computer Science with minor in Mathematics — 2017 – 2021, 2022
  - Major GPA: 4.0
  - Minor GPA: 4.0
  - Medical prerequisite GPA: 4.0
- SUNY Buffalo — Buffalo, NY
  - Doctor of Philosophy, Computer Science (on leave) — 2021

SELECTED COURSEWORK

- BIO 111/112 – Biology I/II with lab
- BIO 211/212 – Biochemistry I/II with lab (expected Fall 2022/Spring 2023)
- CHEM 111/112 – Chemistry I/II with lab
- CHEM 227/228 – Organic Chemistry I/I with lab (expected Fall 2022/Spring 2023)
- PHY 223/224 – General Physics I/II with lab
- CSC 310 – Information Organization and Processing
- CSC 330 – Distributed Computing
- CSC 360 – Intelligent Systems
- CSC 395 – Software Engineering
- MAT211 – Calculus III
- MAT 219 – Linear Algebra
- MAT 311 – Abstract Algebra
- MAT 351/352 – Probability and Statistics I/II

EMPLOYMENT HISTORY

- Computer Science Research Assistant — 2018 – 2021
  - Multiple projects involving medical applications of artificial intelligence. See "Research Grants"
- Computer Science Tutor — 2018 – 2021
  - Assisted students in a laboratory setting. Reinforced class concepts in small group instruction.
- Student Grader — 2019 – 2020
  - Graded student homework assignments for several courses in Mathematics department.
- Computer Science Teaching Assistant (UB CSE 4/568 – Robotics Algorithms) — 2021
  - Reinforced lecture concepts through lab and homework guidance. Held weekly office hours to resolve student concerns.

AWARDS AND HONORS

- Canisius Earning Excellence Program, 2018
- Canisius Earning Excellence Program, 2019
- Canisius Earning Excellence Program, 2020
- Canisius College Excellence in Research Award, 2021
- Canisius College Excellence in Academics Award, 2021
- Dean's List, 8 of 8 semesters
- NSF Graduate Research Fellowship Program - Honorable Mention, 2022

RESEARCH GRANTS

- "Electroskip: Using Machine Learning to Improve Patient Response in Physical Therapy"
  - Investigated the use of recurrent neural networks in creating real-time responses to human motion. Used gait and pressure data for classification of patients with Parkinson's Disease. A study based on this work has shown moderate success in correcting the gait of patients with Parkinson's Disease.
- "Applications of Convolutional Neural Networks in Echocardiogram Analysis"
  - Independently established a relationship between Canisius College and a local medical practice. Gained experience with IRB and HIPAA guidelines. Created a utility to automate removal of PHI. Worked with healthcare providers to label key dimensions frequently referenced during diagnosis. Constructed a convolutional neural network for cardiovascular image segmentation, achieving 98% pixel-wise accuracy over a validation set by leveraging data augmentation with a training set of approximately 180 images.
- "Reinforcement Learning: An Examination of Historical Developments"
  - Worked both independently and with Computer Science faculty to update course content for CSC360: Intelligent Systems. Provided descriptions of popular algorithms along with current research areas.

PRESENTATIONS

- "Electroskip: Using ML to Improve Patient Response in Physical Therapy"   April 2019
- "Applications of Convolutional Neural Networks in Echocardiogram Analysis"   April 2020

PUBLICATIONS

- Charuvahan Adhivarahan, Evan Chugh, Kexin Chen, Ekta Katiyar and Karthik Dantu, "ForeSight: Speeding-up Simulation Rendering for Robot Learning", IEEE International Conference on Robotics and Automation, ICRA 2022 (Under Review).

CONFERENCES

- Multi-Robot Symposium (MRS)   November 2021
- Upstate Medical University, Health Justice Conference   January 2022

EXTRACURRICULAR ACTIVITIES, RELEVANT EXPERIENCE AND SERVICE

- Classical Guitar   2007 – Present
  - Studied classical guitar under the instruction of the Castellani-Andriaccio Duo. Attended master classes taught by world-renowned concert guitarists, and performed regularly both in concert and professional settings.
- Clarence Youth Bureau   2015 – 2017
  - Volunteering experience. Organized charity drives, assisted WNY retirement home residents through multiple social outreach events, and participated in community environmental cleanups.
- Bristol Village Assisted Living & Memory Care   2017 – 2018
  - Volunteering experience. Directly participated in care of residents. Duties included transportation and meal assistance. Contributed to social events through classical guitar performances.
- Highgate Medical Group   2022 – Present
  - Clinical experience. Shadowed healthcare provider in family medicine for more than 150 hours over a 6-month period. Interacted directly with patients of all socioeconomic backgrounds.
- Roswell Park Comprehensive Cancer Center   2022 – Present
  - Volunteering experience. Interacted directly with patients and family members to provide hospitality and comfort during visits.

REFERENCES – UPON REQUEST