Timothy J Scholtz

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EDUCATION

Undergraduate: Computer Engineering - University at Buffalo:

Start Date: 2021 August   End Date: 2025 May   GPA: 3.8

RESEARCH EXPERIENCES

University at Buffalo – Prof. Wenyao Xu   2023 April – August

Conducted research on a collaborative project to develop a classroom tool for analyzing students' speech ability and performance. Worked with a team of peers, under the guidance of a graduate student. My responsibilities included orthographic and IPA transcription. I utilized external libraries and open-source projects, performed accuracy testing, and conducted hardware tests on microphones and mm-wave recorders. This experience enhanced my skills in data analysis, large dataset handling, and software development.

University at Buffalo – Prof. Weihang Wang   2021 December – 2022 August

Worked as a research assistant on a project focused on C to WebAssembly compilation. The project aimed to identify and address potential faults that arise during the compilation process. My role involved developing an automated testing tool to compare outputs generated by C and WebAssembly. By executing a collection of tests in both languages, I could identify discrepancies and flag any differing outputs. Additionally, I provided assistance in writing and editing the research paper.

WORK EXPERIENCES

Teaching Assistant: 2023 September -

Worked as a teaching assistant in an introductory computer science class, alongside a team of TAs.

Conference Host: 2023 May - August

Helped managed conferences, and assisted tenants. Worked with a team to efficiently run Greiner Hall.

Tutor: 2023 February – May

Tutored with both individuals and groups, helping people prepare for exams and complete hard homework problems in physics, math, and computer science courses.

COMPUTER SCIENCE PROJECTS

EchoMind: Python

- I developed a versatile audio tool for speech to text. The tool can take in most audio file formats as inputs, and generate speech, phones, and IPA transcriptions. It uses several different transcription libraries and combines results to produce a single more accurate output, that any individual library. It has a verbose mode, and detailed installation and usage instructions. Offers a testing mode to check the accuracy of a transcriptions.

VOLUNTEER EXPERIENCES

- **Ark Animal Shelter:** Over the course of two weeks, I helped with caring for the dogs in a no kill shelter.
- **STEM Field Trips:** Volunteered to help run UB's hosted STEM field trips, which introduced K to 8th graders from disadvantaged communities to potential STEM career opportunities.
- **Pride Service Day:** Worked with other volunteers doing activities to improve the UB community.
- **SOS Children's Village renovation:** I was part of a group that helped renovate 4 housing units at the orphanage over the course of a week.

AWARDS & INVOLVEMENT

- A Member of the Honors College at the University at Buffalo
- Placed in the Top 1% In the South African Mathematics National Benchmark Test – 2020
- Placed in the Top 50 in the South African Science Olympiad – 2019

SKILLS & TOOLS

Languages: Python, Verilog, Bash, Scala, Java, GDscript
Tools: LaTeX, Audio Processing
Skills: Problem Solving, Analytical Mind, Dependability