ROBERT HOCHGRAF

EDUCATION

B.S. Computer Science | Rochester Institute of Technology 📋 2026

• GPA: 4.0; Current Coursework: MIPS + Computer Organization, Computer Science Theory, Introduction to Artificial Intelligence

EXPERIENCE

Undergraduate Researcher | University of Rochester 📋 June 2022 - Present

- Analyzed the performance of auto-tuning linear algebra (BLAS) libraries.
- Formulated novel algorithm to find OpenCL kernels that are both portable and high performance.
- Achieved up to 7x speedups over a state-of-the-art BLAS library with potential to impact scientific computing projects such as those that discover new proteins to fight disease.
- Authored International Conference on Supercomputing paper submission, pending review.

Python) C++) CLBlast) OpenCL) Algorithmic Design) Statistical Testing

Co-founder and Developer | Indirect App 📋 June 2020 - August 2021

- Industry-first mobile app to train dentists' hand-eye coordination. Developed from concept to commercialization.
- Collaborated with practicing dentist to define requirements.
- Deployed app to Android & iOS stores to reach addressable audience of 18,000+ dental/dental hygienist students.

iOS)(Xcode)(C#)(Unity)(Android

Software Consultant | Sustainable Intelligence, LLC 📋 June 2018 - July 2018

- Gathered software requirements and needs of Montessori students by meeting with a small group of target users.
- Designed on-the-spot custom webpage solutions to spark ideas and foster discussion.

(HTML/CSS)(JS

PROJECTS

Stock Analysis Tools for Low-Vision Users

Developed a custom website and voice assistant skill to help low-vision users research stocks.

- Collaborated with user to define and deliver features such as authentication and predictive neural network models.
- Conceptualized a novel method of summarizing a stock curve in text format.
- Delivered 150+ stock conversations over the course of a year; product used by primary customer for over 3 years.

(Linux)(PHP)(HTML/CSS)(R)(Dialogflow)(Node.JS

AWARDS

- Cameron Kent Buchanan Humanitarian Award: For compassionate altruism.
- Rensselaer Medal: For academic achievement in mathematics and science.
- Audio Combat Champion: For a track that won the RIT EDM Club's Audio Combat Remix Challenge.
- NYS Seal of Biliteracy: For attaining a high level of proficiency in both Spanish and English.

EXTRACURRICULARS

- Member | Computer Science House | Project Highlight: CampusFood, a website to display real-time congestion of dining halls so that CSH members can avoid long waits.
- Member | EDM Club | Avid Logic Pro user and producer of electronic dance music.
- Student Karate Instructor | Eastside Martial Arts | Managed classroom activities and lead groups of 5 to 25 high-energy students. Candidate for black belt.