Zachary Minot

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Experience

MICROSOFT

Software Engineering Intern *May 2022 - Aug. 2022*

- Designed and built a custom radio frequency FPGA block to convert from a proprietary packet type to the DIFI standard using **SystemVerilog** and **C++**, enabling 4x overall efficiency
- Implemented a DIFI packet C++ library and a 'middleman' proprietary to DIFI packet software, installed/compiled via **CMake**

GEORGIA TECH

Incoming Graduate Teaching Assistant for Deep Learning *Aug. 2022 - December 2022*

AMAZON, INC

Software Development Engineer I Intern *May 2021 - Aug. 2021*

- Designed and constructed a monthly calendar view in an internal dashboard for specific events in **Angular/Typescript**, saving both business users and SDEs time and effort in editing and testing
- Identified unsupported packages and defective unit tests within the existing project and created plans to fix the issues

GEORGIA TECH

Head Teaching Assistant *May 2020 - May 2022*

- Trained and Led 15+ TAs across 4 different teams, working closely with the professor while balancing normal TA responsibilties including office hours and grading students' work
- Supervised an overhaul of a project-based **Object-Oriented Design** course with 470-530+ students

ROCKEFELLER CAPITAL MANAGEMENT – MERLIN WEALTH MANAGEMENT

Software Development Intern *Jan. 2021 - May 2021*

- Extended internal application to aid in management of company data with **React** and **Python Flask**

CONVOPANDA

Software Intern *May 2019 - Jan. 2020*

- Full-stack development using **Ruby on Rails, Bootstrap, and HTML/CSS/JS**.

Projects

SUPER NEAT BROS.

Team Lead *Fall 2020*

- A machine learning team project that trains a model to both play and memorize Super Mario Bros. on an NES emulator
- Built the image recognition portion of the project, including the data cleaning, KMeans, and CNN
- **Built with: Pytorch, Scikit-learn, Python, Jupyter-Notebook, Lua**

MACHINES ARE AMONG US

Co-Developer *Fall 2020*

- Training Recurrent Neural Networks (LSTMs) to "communicate" back and forth to determine which of them is an imposter and attempting to find interesting results, inspired by the game Among Us
- **Built with: Pytorch, Python**

G-PAD (GENERAL-PURPOSE AUDIO DEVICE)

VHDL/Script Developer *Fall 2020*

- Used an FPGA (DE-10 Lite) for square wave generation to a protoboard speaker to write music
- Implemented the first version of note production, the ability to play notes on two speakers at once, and wrote a Python script to aid in composing music
- **Built with: VHDL, Python**

Education

Georgia Institute of Technology

Class of 2023

- M.S. in Computer Science
  Computer Systems

Georgia Institute of Technology

Class of 2022 – 3.96 GPA

- B.S. in Computer Science
  Systems/Architecture and Intelligence

Skills

LANGUAGES

- C++/C
- Verilog/SystemVerilog
- Java
- Python
- x86/x86_64
- Bash
- HTML/CSS/Javascript
- Typescript
- SQL

TECHNOLOGIES

- Xilinx Vivado
- Pytorch/Scikit-Learn/NumPy
- Linux
- Git/GitHub
- Microsoft Azure
- OpenMP/OpenMPI
- JavaFX
- Qiskit

MISCELLANEOUS

- Drums and Bass
- Frisbee
- Board Games and D&D

Relevant Courses

SYSTEMS

Advanced Operating Systems, Real Time Systems, Operating Systems, Computer Systems and Networks, Processor Design

- All As

A.I./OTHER

Machine Learning, Deep Learning, Computer Vision, Data Structures and Algorithms

- All As