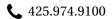
DONOVAN CLAY

Software Engineer



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github.com/donovanclay

WORK EXPERIENCE

Amazon (AWS SageMaker, Seattle) Software Development Intern

Jun. 2024 - Sep. 2024

Setup CI/CD infrastructure to automate the test and release process of the SageMaker CodeEditor app.

- Used AWS Cloud Development Kit to write "infrastructure as code"
- Automated release through Conda Forge; eliminates 2-3 weeks of work per release of a new version
- Automation triggers tests running on AWS for every contribution to the open source repository

Univ. of Washington, Paul G. Allen School of CSE Machine Learning Teaching Assistant Sept. 2024 - Dec. 2024 I assisted in teaching the graduate and undergrad **Machine Learning** class with around 230 students.

- Contributed to creating and grading the biweekly homework assignments
- Coordinated with 8 other TAs as the only undergraduate TA in the staff
- Hosted support hours 5 hours a week to help students understand concepts from class and debug their projects

Univ. of Washington, Paul G. Allen School of CSE Digital Design Teaching Assistant

Ian. 2024 - Mar. 2024

- I assisted in teaching a Digital Circuit Design class of 43 students.
- Hosted support hours 5 hours a week to help students understand concepts from class and debug their projects
- Coordinated with a teaching staff of 5 other people to grade weekly assignments

RESEARCH EXPERIENCE -

UW ACME Lab HLS4ML Team

Jan. 2024 - Current

Team is developing software to convert from neural network code, written in Python, to SystemVerilog, which implements the ML models in hardware on FPGAs.

- Developed benchmarks to test handmade SystemVerilog models against the SystemVerilog model generated by the HLS4ML tool
- Coordinated with a team from Drexel University to collaborate on a system to monitor material deposition
- · Investigated errors in the HLS4ML implementation of the Keras BatchNormalization layer

PROJECTS

Indoor Air Quality Controller https://github.com/donovanclay/isy

Jul. 2022 - Sep. 2023

This controller manages the supply and exhaust fans in a house to keep stable air pressure and humidity.

- Communicated with APIs to poll local weather, air quality, and the house's security system
- Used sensors to detect airflow, humidity, motion, and occupancy and control fans based on that data
- Used Python sockets to implement a Websocket to send live updates about the state of the application
- Used React and NextIS to develop and Docker to deploy a local website to show real time diagnostic data
- Used Python to implement logic to equalize exhaust airflow with supply airflow

illustrAItor Finalist in UW Hackathon 2022 https://github.com/donovanclay/illustrAItor

Oct. 2022

This project makes reading more enjoyable by complementing it with customizable AI-generated illustrations. illustrAItor creates captivating illustrations to complement the passage of text being read.

APIs used: Stability AI Image Generation, Google Books.

- Produced the project in 24 hours in a highly competitive environment
- Worked in a small group of 4 for long hours
- Used multiple API's to pull and serve information to and from different services

EDUCATION

B.S. Computer Engineering with Honors University of Washington

Paul G. Allen School of Computer Science and Engineering

Sep. 2022 - Jun. 2025 3.92 Major GPA

B.A. Comparative History of Ideas University of Washington

Interdisciplanary degree in social sciences, philosophy, communications, sociology, and more

Sep. 2022 - Jun. 2025 3.92 Major GPA

Computer Engineering Prerequisites Bellevue College

Sep. 2020 - Jun. 2022

Transfered to University of Washington

3.93 GPA

SKILLS

Python - Java - C/C++ - Rust - AWS - SystemVerilog - FPGAs - PyTorch - TensorFlow - GitHub Actions - Docker