

EMILY WEYDA // Software Engineer

Experienced software engineer with a Bachelor of Science in Computer Engineering and a Minor in Computer Science, offering 4+ years of software development experience. Seeking a challenging Software Engineer role to contribute research, design and innovation in a dynamic, collaborative environment.

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Education

University of Cincinnati

📍 Cincinnati, Ohio // Class of 2020
College of Engineering & Applied Science
B.S. in Computer Engineering
Minor in Computer Science

University of Birmingham // Study Abroad

📍 Birmingham, England // Fall 2018
School of Computer Science
First Class Honours

Technical Skills

Languages

Python · Java · C/C++ · C#/.NET ·
Golang · SQL · JavaScript · MATLAB

Tools

- **Cloud Computing:** AWS & GCP
- **Containerization:** Docker & Kubernetes
- **Version Control:** Git, GitHub, GitLab
- **Build & Deploy:** Bazel, Spinnaker, Drone
- **Databases:** PostgreSQL, Redis, SQLite, Elasticsearch, Microsoft SQL Server

Projects

Dram Good Recommendations

A whiskey recommendation system, currently under development, using a microservices architecture built with *FastAPI*, *SQLAlchemy*, *PostgreSQL*, *Docker*, *TensorFlow* and *React*

Processing & Updating Position in Python

A *deep learning* model for motion prediction using accelerometer and gyroscope data from a smartphone using *Python* (*pandas*, *NumPy*, *IPyWidgets*, *TensorFlow*, *Keras*, *Matplotlib* & *seaborn*)

Personal Portfolio

A responsive website built with *HTML*, *CSS* & *JQuery*, hosted on *GitHub Pages*

Flappy Tina

Bob's Burgers themed "Flappy Bird" game written in *Swift* with precise physics for realistic component interactions

Brick Breaker

Python version of the classic arcade game "Breakout" using *PyGame*

Professional Experience

Platform Software Engineer // Descartes Labs

📍 Remote // February 2021 – September 2023

- Designed, developed and maintained scalable systems and subsystems powering the Descartes Labs (DL) platform, granting low-latency access to nearly 5 petabytes of geospatial data and analytics
- Promoted exceptional teamwork by facilitating in the interview and onboarding processes, fostering remote collaboration and paired programming, and driving team growth in a 100% remote environment
- Migrated critical services, including a highly scalable delayed job processing and queueing system from *GCP* to *AWS*, cutting cloud costs by 70% and enabling cloud-agnostic data ingest and image processing
- Engineered a serverless cloud computing service harnessing *AWS* (*S3*, *SQS*, *ECS*, *CodeBuild*, *Step Functions*) enabling users to run user-defined *Python* code with many advanced features for organized and efficient code execution at scale, 30% faster than its predecessor
- Developed a *Python*-based, *gRPC*-powered parameterized model API, safeguarding intellectual property while allowing customer parameter adjustments, complete with an ergonomic client interface and seamless integration with DL's central data repository for efficient data access
- Built a secure, *Golang*-based structured data storage system with *gRPC* and *PostgreSQL*, simplifying asset access and sharing among users and orgs across platform services, enhancing usability and user experience

R&D Software Engineer // Siemens Software Co-op

📍 Milford, Ohio // January 2019 – August 2019

- Led the integration of cutting-edge technologies (*GCP*, *Google AutoML*, *Docker*, *REST APIs* & *Node.js*) to deliver impactful proof-of-concept projects, while actively pursuing expertise in machine learning, quantum computing and natural language processing
- Revamped and optimized *machine learning* tools, achieving 90%+ model accuracy, while streamlining end-to-end data preprocessing, model training and deployment
- Engineered a dynamic conversational interface for 3D modeling, merging *Siemens NX* and *Google Dialogflow* to enhance design workflows and user experience

Cyber Software Engineer // ICR, Inc. Co-op

📍 Mason, Ohio // January 2018 – May 2018

- Enhanced *GitLab CI* for post-merge testing using webhooks and *REST APIs*, fostering efficient team communication
- Self-taught *ARM assembly* skills for ARM exploit development by emulating *Raspberry Pi* with *QEMU*, debugging with *GDB-GEF* and reverse engineering with *Binary Ninja*

R&D Software Engineer // Honeywell Integrated Co-op

📍 Mason, Ohio // August 2016 – August 2017

- Delivered customer-centric hardware and software solutions within an *Agile Scrum* team using *C#/.NET*, *Microsoft SQL Server* and *WinForms*
- Led deployment of a log file management service, enabling users to efficiently view, mark up, sort and export log files