

# ANDREW EGGLESTON

## Software Engineer

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## WORK EXPERIENCE

### UMass Lowell

#### Undergraduate Researcher

Working under Prof. Anitha Gollamudi extending LLVM to target Trusted Execution Environments (TEEs) like **Intel SGX** and **arm TrustZone**. Working with LLVM codebase in C++ on intrinsics and optimization passes supporting enclaves. Stated goal is to target the OpenEnclave SDK so that security-annotated LLVM IR can be run on SGX and TrustZone.

📅 May 2024 - Present

📍 Lowell, MA

### Genelec Inc.

#### Technician

Creating tools to streamline shipping procedures. Managing network architecture to support **Dante** networking protocol with DHCP and mDNS. Testing software which managed DSP calibration hardware installed in speakers.

📅 March 2020 - May 2024

📍 Natick, MA

### Open Avenues Foundation

#### Student Consultant

Completed a software development industry project at thirdweb. Gained a strong conceptual understanding of blockchain principles, specifically **Ethereum** and the **EVM**. Used **Solidity** to complete a series of programs, culminating in a self-directed project. I made a tictactoe game where players can wager eth on who will win the game.

📅 Fall 2023

### Northrop Grumman

#### Software Engineer

Created an employee management database. Gained experience in **Java EE**, **angular.js**, and **SQL**. Utilized Agile software development process to organize tasks.

📅 June 2019 - August 2019

📍 Baltimore, MD

## PROJECTS

### Death By Dagger

[github.com/andreweggleson/DeathByDagger](https://github.com/andreweggleson/DeathByDagger)

A game resembling 'Senior Assassin,' updated for the electronic age. Made use of the **Slack API** to keep players updated on their status in the game. Created using **Go**, with data hosted on **PostgreSQL**.

### OxiDish

[github.com/andreweggleson/OxiDish](https://github.com/andreweggleson/OxiDish)

A CRUD app to store recipes, queryable by ingredients. Great for figuring out what you can make with ingredients in your fridge. This is just the backend, written in **Rust** with the **Axum** web framework and **sqlx**. Exploring **Elm** and .

## SUMMARY

*Enjoys deep dives into systems - specifically formal verification of software tools.*

## SKILLS

### Languages

Java

C

Python

Go

Rust

### Tools

Linux

git

Bash

SQL

Nix/NixOS

Docker

Coq

## COURSEWORK

Operating Systems

Computer Architecture & Assembly

Organization of Programming Languages

## EDUCATION

### UMass Lowell

#### BS in Computer Science

📅 December 2025

### MassBay Community College

#### AS in Computer Science

📅 December 2023

## ACTIVITIES

### MassBay ACT CyberRange

#### Student Worker

📅 January 2022 - Present

Managing a cluster of Xen Hypervisor machines used to host virtual labs (a Cyber Range) for Cyber Security and Computer Science students

### UMass Lowell CCDC

#### Competitor

📅 May 2024 - Present

Participating in Cyber Defense competitions, learning how to defend infrastructure from mock attacks.

## AWARDS

### Dean's List

📅 Fall '22, Spring '23, Fall '23, Spring '24