



**Eli Newlin**  
Iowa State University  
Computer Science BS

📞 708-267-9122  
✉ elinewlin@gmail.com  
✉ newlin18@iastate.edu

## EDUCATION

---

### •Iowa State University

08/2021 - CUR

-Senior Year **Computer Science** Student (Graduating May 2025)

GPA: 3.3

-Course work includes: **Data Structures, OOP Programming, Algorithms**

-Minor in **Cybersecurity**

## EXPERIENCE

---

### •SoilSerdem

9/2023 - CUR

Full Stack Developer Intern

Ames, Iowa

- Spearheaded development on an **NextJS + ExpressJS** web app that allows farmers to look at data in a new way
- **Liaised team of 4 data scientists** to deploy analysis tools and provide access to users
- Spearheaded **accelerating** project from 3 months behind to on schedule
- Grew into role **replacing external development team** and brought programming in-house, increasing development efficiency by **80%**
- Connected platform to **AWS S3** to store and retrieve user files
- Wrote efficient Frontend and Backend code to ensure **low-latency product** bringing data from database to client

### •Big Data In A Box Solutions LLC

11/2021 - 9/2023

Intern

Ames, Iowa

- Designed an **SQL database using Azure Web Services** to store user information
- Constructed a functioning serverless **Rest API** using Azure Functions, **reducing** running costs by **700%**
- Integrated **OpenAI** functions and developed a serverless backend with Azure to power an Angular Frontend
- **Collaborated with team of 3 Developers** to connect Angular Frontend to Azure Powered Backend

## PERSONAL PROJECTS

---

### •Raytracing Engine

08/2024 - CUR

In progress creating a multi-threaded ray tracing engine for computer graphic ppm generation

Tools & technologies in project: **C++, Make, git**

- Implemented **anti-aliasing** via random pixel sampling to provide accurate color blending between objects
- Calculated **reflection and refraction** via vector math and different simulated materials
- Multi-threaded the application to reduce render time, causing an **81% decrease** in runtime

### •News++

06/2024 - CUR

Expanded upon current knowledge by trying new framework to create blog site

Tools & technologies in project: **Astro, CSS, JSX, Markdown, git**

- Collaborated with partner to **coordinate progress** and reduce development time resulting in a 3 day production time
- Constructed article database via **AstroJS collections** to display data for readers

### •Poke327

01/2023 - 04/2023

Developed a Curses Pokemon game with map generation, NPC's, and battle

Tools & technologies in project: **Curses, C++, C, CSV, Make, git**

- Leveraged **C++ pointers, vectors, and g++ compiler, git** to create a Pokemon-like terminal game
- Implemented **Curses library** to generate Maps and Battle Interface with color for player in-game

## TECHNICAL SKILLS AND INTERESTS

---

**Languages:** Python, Java, CSS/HTML, Javascript/Typescript, C/C++

**Developer Tools:** Postman, Azure, AWS, Git

**Frameworks:** ReactJS, Astro, NextJS, Flask

**Cloud/Databases:** Azure, AWS, Microsoft SQL, SQLite, MongoDB, MariaDB/MySQL

**Soft Skills:** Communication, Team Work, Leadership

**Coursework:** Data Structures, Algorithms, low-level programs

**Areas of Interest:** Web apps, Open Source, Linux