Emma Hoffmann

erhoffmann128@gmail.com | 763-310-6358 | linkedin.com/in/emmarhoffmann | github.com/emmarhoffmann

EDUCATION

St. Cloud State University — St. Cloud, MN

Bachelor of Science in Computer Science — May 2025

- **4.0 GPA** | Dean's List | Awarded **$8,000+** scholarships by SCSU for academic excellence and leadership

TECHNICAL SKILLS

Languages: Python, C++, C, C#, Java, JavaScript, MATLAB, R, Ruby, Liquid, HTML, CSS, Perl
Tools: Git, VS Code, IDLE, Dev C++, Qt, Unity, Figma, LLMs, CAD, Google Cloud and Workspace, Microsoft Office
Operating Systems: Windows, MacOS, Linux
Coursework: Data Structures & Algorithms, Programming Language Concepts, Software Systems, Operating Systems, Expert Systems, Artificial Intelligence, CS Communication, Calculus I & II, Discrete Math, Linear Algebra

EXPERIENCE

Lakeline Design, LLC — Cambridge, MN

Business Owner, Digital Artist and Designer, Technical Lead — Mar. 2020 – Present

- Executed entire business operations: artwork creation, e-commerce platform administration, order fulfillment, and customer support, achieving over **3,000 sales**, **300+** custom orders, and over **400** positive reviews
- Co-developed a custom **Shopify app** with **Python**, utilizing **API** integration to automate product management, and implemented an extensive system for automated product image creation, achieving up to **98%** time savings, **100%** conversion rate increase, and significantly enhancing overall customer experience
- Reduced bounce rate by **40%** through extensive code development and e-commerce enhancements

RESEARCH & PROJECTS

Comparative Analysis of Sorting Algorithm Efficiency in C++, Java, and Python — Jan – May. 2024

- Conducted in-depth analysis of **5** algorithms in **3** languages, assessing performance over datasets ranging from **1,000** to **100,000** elements to determine the impact of programming languages on efficiency
- Utilized precise timing functions and rigorous testing procedures to ensure accurate results, leading to insights that underscore the critical role of language choice in computational tasks

Movie Night Application — Mar – Apr. 2024

- Engineered an interactive Qt application for movie selection, incorporating a responsive QML user interface, efficient stack data structures, and robust C++ backend functionality
- Led a **3-member** team using Git and GitHub for version control and CI/CD implementations, enabling seamless collaboration, facilitating automation, and ensuring code quality and operational efficiency

Server Workspace Configuration — Feb. 2024

- Led a **3-member** team in configuring a Google Cloud VM with LAMP stack, setting up a Cloud Storage Bucket, establishing SSH RSA keys, and developing a program for file management between the VPS and Google Cloud, ensuring successful data operations and secure remote connections

Evolution Simulator — Feb. 2024

- Developed Python simulation with over **1,000** virtual creatures modeling natural selection dynamics

Library Management System — Sept. 2023

- Implemented Python library management system, using CSV data for efficient data storage

Prisoner's Dilemma Game — Dec. 2022

- Created strategic simulation for **2-player** interactions within **8** strategy framework of game theory

Snowfall Totals Programs — Apr. 2022

- Designed dual-language programs in C++ and MATLAB for precise data collection and analysis

ACTIVITIES & ACHIEVEMENTS

- SCSU Computer Science Club — Aug. 2023 – Present
- Fink Scholarship Fund, **1 of 5** in MN awarded **$25,000/yr** for extraordinary accomplishments — Feb. 2023
- Women Who Code, Twin Cities — Sept. 2022 – Present
- Women's Center for Entrepreneurship — Sept. 2022 – Present