# SAM FELD

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#### **EDUCATION**

Quinnipiac University, Hamden, CT

May 2025

Master of Science; Major: Computer Science

Overall GPA: 3.93

Coursework: AI, Web-Development, Software-Development, Data mining, Computer Architecture, Cybersecurity, Algorithmic

design, Advanced Computational Problem Solving, Formal Specification Methods, Computer Graphics

Excelsior University, Albany, NY

January 2024

Bachelor of Science; Major: Liberal Arts

Overall GPA: 4.00

Coursework: Persuasive Writing, Group Communication, Critical Thinking and Logic

#### SKILLS

Programming Languages: Java, Python, JavaScript, TypeScript

Web Technologies: HTML, CSS, React Modeling & Specification: UML, OCL

Design Tools: Photoshop, Illustrator, InDesign, Figma Version Control & Tools: Git, GitHub, VS Code

Other: Agile/Scrum familiarity, Responsive Design, REST APIs, Notion

Spoken Languages: English (Native), Hebrew (Fluent)

## TECHNICAL PROJECT EXPERIENCE

Animal Web App — TypeScript, Node.js, Express, HTML/CSS

Designed a full-stack web application for managing animal profiles with dynamic frontend pages and a secure admin portal.

## Mafia for iOS — Swift

Developed an app version of the social deduction game Mafia, featuring random role assignment and day/night cycles.

## **Connect Four AI** — *Python*

Implemented an alpha-beta pruning AI agent with configurable depth limits and evaluation functions to play Connect Four.

#### K-Means Clustering — Python, Matplotlib

Created a clustering tool using k-means with support for iterated runs and gap statistic-based cluster count selection.

### **Subway Pathfinding** — Python

Applied classical search algorithms (DFS, BFS, UCS, A\*) to compute optimal routes through real-world subway systems.

## **Interactive 3D Room** — Python, OpenGL

Developed an OpenGL-based interactive 3D scene with textured models, dynamic lighting, user navigation, and animated elements.

#### Longest Common Subsequence for Three Strings — Java

Built a dynamic programming solution with a 3D matrix to compute and reconstruct the longest common subsequence of three strings.

#### Dynamic Bounding Box (3D Points) — Java

Implemented a data structure for labeled 3D points using nested TreeMaps for efficient insert, update, delete, and boundary tracking.

## LZW Compression & Decompression for DNA Data — Java

Implemented the Lempel-Ziv-Welch algorithm to compress and decompress nucleotide sequences, ensuring lossless reconstruction.

#### **Personal Portfolio Website** — *React, TypeScript*

Built and deployed a dynamic portfolio site to showcase projects using JSON-driven components and custom UI logic.

The site can be accessed here: www.samfeldsportfolio.com

It features all projects listed on this resume along with additional work, detailed descriptions, and repository links.

## **EMPLOYMENT**

RC-Swift LLC, Waterbury, CT | Warehouse management Hillside Creative Group , Waterbury, CT | Graphic designer Kindred Spirit ABA, Waterbury, CT | ABA Therapist

2018 - 2024

2021 - 2023

Summer 2023