Edward Stanford

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Education

M.S. Computer Science *University of Utah* — 2025 - 2026 *expected*
B.S. Computer Science *University of Utah* — 2021 - 2025
Mathematics Minor *University of Utah* — 2021 - 2025
Certificate in Data Science *University of Utah* — 2021 - 2025

Awards & Honors

Grateful Alumni Scholarship *University of Utah* — Fall 2024
Kiri Wagstaff AI/ML Scholarship *University of Utah* — Fall 2024
Richard B. & Brenda R. Brown Endowed Scholarship *University of Utah* — Fall 2024
College of Engineering Departmental Scholarship *University of Utah* — Fall 2023, Spring 2024
Dean's List *University of Utah* — 2021 - 2025 *(all semesters)*

Experience

Computer Systems Teaching Assistant *University of Utah* — January 2026 - Present
- Helped over 175 students by managing Piazza discussions, grading assignments, and provided detailed feedback on student submissions.
- Ran labs and held help hours for students to address questions and clarify concepts.

Capstone Teaching Assistant *University of Utah* — August 2025 - December 2025
- Met weekly with student teams to provide specific feedback on projects.
- Assisted in maintaining course materials, and graded assignments.

Software Practice II Teaching Assistant *University of Utah* — August 2023 - May 2025
- Supported over 200 students by managing Piazza discussions, grading assignments, and provided detailed feedback on student submissions.
- Ran labs and held help hours for students to address questions and clarify concepts.

GREAT Elementary School Summer Camp Instructor *University of Utah* — June 2024 - July 2024
- Taught robotics concepts to elementary students with hands-on activities.
- Supervised a structured learning environment for children.

Undergraduate Research Assistant *University of Utah* — March 2022 - July 2022
- Simulated micro-fibers and fibrous materials using SOLIDWORKS to contribute to research projects.
- Authored comprehensive technical reports with LaTeX to document research findings and methodologies.

Projects

Full Stack Photo Sharing App (Capstone Project) - BeThere *C#, React* — August 2024 – Present
- Developed a backend server with a modular REST API to handle photo uploads, user management, and clustering based on geolocation data.
- Integrated PostgreSQL for robust data storage and implemented efficient database operations with LINQ.
- Built an access control system linking users to clusters, allowing selective photo album visibility based on user presence at locations.

Rust GUI for ELO Media Ratings *Rust* 🔗 — July 2024 - Present
- Implemented an Elo rating system for media ranking and viewing using egui.
- Developed data persistence features with spreadsheet output for seamless data transfer.
- Automated image fetching and integrated UI for a user-friendly experience.

Path of Memories Gamejam *C# with Unity* 🔗 — January 2023
- Built a 2D platformer game featuring a robust dialogue system and player progression tracking.
- Added diverse player abilities including wall climbing, double jumping, and dashing.
- Integrated character interactions and level design to enhance player engagement.

Scamper Gamejam *C# with Unity* 🔗 — October 2022
- Developed 2D side-scrolling mechanics with advanced jump buffer and coyote time for seamless player control.
- Managed layer transitions and animations for a smooth and immersive visual experience.
- Collaborated with a team to integrate game assets and ensure cohesive design elements.

Prime in Five Gamejam *C# with Unity* — September 2022
- Created a dynamic gameplay experience with AI, procedural enemy generation, and complex health systems.
- Programmed top-down player movement mechanics and integrated a timer-based win condition.
- Designed and implemented user interactions to ensure engaging gameplay flow.

Full JPL Compiler *C++, Rust* — January 2025 – May 2025
- Developed a full compiler for the JPL programming language.
- Implemented lexical analysis, parsing, semantic analysis, optimization, and code generation.
- Implemented advanced features including type checking, scope management, and code optimizations.

Circuit Simulator QT Application *C++* — April 2023
- Designed an educational game simulating circuit logic with user-customizable gates.
- Managed save functionality using JSON for persistent user data.

Developed an intuitive UI for interactive learning experiences.

LMS Website *C#* April 2023

Developed a learning management system leveraging a MariaDB backend.
Ensured seamless integration between front-end and back-end using .NET technologies.
Implemented user authentication and course management features.

Sprite Editor QT Application *C++* March 2023

Created a comprehensive sprite editor with detailed UI and user interactions.
Supported multiple image formats and export options.
Implemented advanced drawing tools and color manipulation features.

Snake Network Game *C#* October 2022 – December 2022

Built a networked snake game with distinct server and client implementations.
Managed multiplayer functionality with real-time synchronization.

Spreadsheet Application *C#* August 2022 – October 2022

Developed a user-friendly spreadsheet tool following the MVC design pattern.
Integrated .NET MAUI for cross-platform compatibility.
Enhanced the user experience with interactive data manipulation features.

Tower Defense Game *Java* October 2021 – May 2022

Designed a tower defense game employing OOP concepts like inheritance and polymorphism.
Balanced gameplay mechanics for progressive difficulty scaling.

Misc

Advent of Code 2025 *Rust* 🔗 December 2025 - January 2026

Solved 22 challenges focusing on dynamic programming, graph algorithms, and geometric problems.
Improved proficiency in Rust through practical problem-solving applications.
Implemented efficient data structures and algorithms to optimize solution performance.

Advent of Code 2020 *C++* December 2020 – May 2022

Solved 48 challenges focusing on recursion, encryption, and data structures.
Enhanced problem-solving skills with complex algorithm implementations.
Applied OOP principles to build modular and maintainable solutions.

Project Euler *C++, Python* August 2020 – December 2020

Tackled 59 mathematics and computation-intensive problems.
Employed efficient algorithms to handle large-scale numerical challenges.
Strengthened mathematical reasoning and coding proficiency.

Technology

Experienced

C++, Rust, C, C#, Python, Java, SQL, VSCode, Qt, Docker, Linux, MacOS

Proficient

Latex, Typst, R, Git, MS Visual Studio, MS Office, XCode