



# Joseph Cagle

Self-taught full-stack developer and Computer Science student at the University of North Florida

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## EDUCATION

### University of North Florida

B.S. Computer Science, minor in Mathematics – Expected graduation Fall 2025

- In-major GPA 4.0; cumulative GPA 3.97; 4x Dean's List
- President, Osprey Competitive Programmers; Participated in 2023 ICPC regionals

## SOFTWARE EXPERIENCE

### Software Development Intern — CSX Technology ◦ May 2024 – Present

- Trailblazed & built a REST API for CSX's printers, for an app used by all 7000 trainmen (OpenLiberty, OpenAPI)
- Mapped app APIs for migration and added enhancements on an Agile team of ~20 people (Node, Angular)
- Developed a Copilot Studio chatbot with ~20 interns and business partners for CSX's internal knowledge base

### Student Researcher — UNF ◦ May 2024 – Present

- Researching automated cell protein function prediction with two professors and another student
- Collaborated to survey the current state of the art, replicate studies, and design new ML models & techniques
- Used numpy, pandas, matplotlib, and Biopython to analyze 5.4M proteins and transform 3D structures

### Web Developer — Calvary AG Valley Head ◦ July 2022 – August 2022

- Designed and built a responsive website (Gatsby, GraphQL), published with continuous integration/delivery
  - View the site at <https://calvaryvhvw.org>
- Sourced site content data from a CMS (Contentful), giving the client 100% control over content

### Volunteer Game Developer — Championship Chess ◦ August 2020 – June 2022

- Built a web-based chess training/practice game (JavaScript, CSS, Firebase)
  - Play the game at <https://attack-chess.web.app>
- Automated game level generation, transforming a database of 1 million+ chess positions (Java, Node)
- Developed the chess board UI and game animations from scratch and added chess move validation
- Visualized over 2600 user scores to inform gameplay balancing decisions, using a custom matplotlib graph

### Lasers, Inc. — [Hobby project] ◦ April 2021 - August 2022

- Created a side-scrolling shoot-em-up game inside Neovim (with its Python RPC plugin APIs)
  - Watch a preview or clone the repo at <https://github.com/josephcagle/LasersInc.nvim>
- Implemented 130+ FPS continuous physics and parallax backgrounds in the terminal
- Composed a 38-second music loop for the title screen and generated custom sound effects

## TECH SKILLS

- Java, Python, GraphQL, SQL
- GCP, Firebase, Netlify
- tensorflow/scikit-learn (AI/ML)
- HTML, CSS, JS, React, TS
- Git/GitHub, Jira
- Linux Sysadmin, bash, vim

## ADDITIONAL EXPERIENCE

### Chess Coach and Tournament Director — Various organizations ◦ 2015 – Present

- Coached clubs with 40+ kids, teaching lessons up to 60 mins, and directed tournaments of up to 65 players

View this resume online and see my favorite projects at [resume.josephcagle.com](https://resume.josephcagle.com)