

# Drew Goldstein

## B.S. in Physics

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[github.com/ultraluckyclover](https://github.com/ultraluckyclover) • [www.linkedin.com/in/drewgoldstein1/](https://www.linkedin.com/in/drewgoldstein1/)

**Website:** <https://ultraluckyclover.github.io/web-portfolio/src/>

## Technical Skills

**Programming:** Python, C++, JavaScript, React, Node.js • **Mathematics:** Calculus, Linear Algebra, Statistics, Differential Equations

• **Database Management:** Mongoose, Pandas • **Version Control:** Git, GitHub • Unix • Data Collection, Analysis, and Visualization

• Source-Level Debugging • Troubleshooting Hardware

## Projects

### Spotify Letterboxd Web Application

• Developing an interactive music diary by integrating with the Spotify API, allowing users to track their listening habits and favorite tracks.

• JavaScript, React, Node.js, Express

### Letterboxd Web Scraper

• Scrapes the Letterboxd watchlist of a given username using Python with Selenium, stores movies in a Pandas DataFrame, and outputs a randomly selected movie.

• Python, Selenium, Pandas

### Wordle as a Thermodynamic Process

• Modeled the game Wordle as a thermodynamic process by mathematically deriving the relationship between thermodynamic entropy and information uncertainty, then implemented this in Python to generate the statistically optimal next guess.

• Utilized and enhanced existing Python source code from 3Blue1Brown to support analysis and run step-by-step testing.

### Physics Computation Projects

• Physics computation projects involving solving differential equations using the Runge-Kutta method, simulating systems with Monte Carlo techniques, and applying numerical methods for error analysis and optimization in complex physical systems.

• Currently working on a machine learning project aimed at classifying particle species using a Multi-Layer Perceptron and Random Forest Classifier, with analysis of model performance through correlation plots, ROC curves, and confusion matrices.

## Education

### Florida State University

Tallahassee, FL

Bachelor of Science in Physics, Minor in Mathematics

Relevant Coursework: Statistics for Scientists and Engineers, Computational Physics, Object Oriented Programming

## Work Experience

### Technical Operations Specialist (40 hours/week)

Tallahassee, FL

International Game Technology

May 2024 - Present

• Serve as a liaison between IGT and the Florida Department of Lottery as part of the Lottery's operational support.

• Support the seamless operation of computer systems by executing recovery tasks to restore normal functionality, ensuring uninterrupted service for retailers.

• Collaborate with Field Service Technicians to diagnose and resolve terminal-specific technical issues efficiently.

• Engage in company-sponsored learning during downtime to advance skills in data science and web development through projects in Python and JavaScript.

### Operations Supervisor (15 hours/week)

Tallahassee, FL

Ology Coffee Co.

Oct 2022 - Present

• Proficient in resolving conflicts and deescalating tense situations among coworkers and patrons in order to foster a relaxing and collaborative environment.

• Organize and lead community-focused coffee events, strengthening relationships with local customers and enhancing brand visibility.

• Generated \$150,000 in revenue for the company last year, with weekly profits between \$3,000 and \$5,000 this year.