Drew Goldstein

B.S. in Physics

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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.   Tallahassee, FL

Education

Florida State University

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
• Monitor live electronic logs of all the hosts and communication servers for the Florida Lottery.

• Assist in the daily operation of computer systems and recovery activities to restore normal operations, ensuring smooth and uninterrupted functionality for retailers.

• Communicate with Field Service Technicians to troubleshoot and resolve issues for specific terminals.

• Execute data science tasks such as web scraping, data visualization, and data analysis across various programming languages.

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, fostering a harmonious 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.