

# Owen Sheed

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## EDUCATION

### Elon University

*Bachelor of Science in Computer Science, Minor in Data Science; GPA: 3.29*

Elon, NC

*Aug. 2020 – Dec. 2024*

## TECHNICAL SKILLS

**Languages:** Python, Java, Javascript, C/C++/C#, Go, SQL (Postgres, MySQL), Arm Assembly

**Frameworks:** Spring Boot, .NET Framework, ASP.NET Core, Next.JS, Node.JS, OpenCL

**Developer Tools:** AWS, Git, Postman, Colab, VS Code, IntelliJ (IDEA, PyCharm, CLion), Anaconda, Linux

**Libraries:** pandas, NumPy, Java AWS SDK, boto3, Lombok, Pthreads, CUDA, MPI, Requests

## EXPERIENCE

### Software Development Intern

June 2023 – July 2023

*Equiniti Trust Company*

*New York, NY*

- Developed a REST API in ASP.NET Core for user data, integrating JWT authentication, log4net logging, and async endpoints; stress-tested using a multithreaded Python script.
- Constructed a tool that parsed log files to produce detailed Excel reports, with features like error-specific reporting and SMTP-driven email delivery.
- Acquired in-depth proficiency in C# and .NET, focusing on advanced features like lambda expressions, asynchronous functions, and secure data handling techniques.
- Strengthened abilities in effective communication, rapid learning, and problem-solving, coupled with insights into the finance industry, particularly regarding funds and transfer agents.

### Project Manager

March 2022 – July 2022

*EJB Investments*

*Miami, FL*

- Played a pivotal role in the successful release of a combined art and utility NFT collection, securing a 5-minute sellout, 30 ETH in volume, and 1.2k verified holders.
- Personally designed and built high-performance computers tailored for demanding applications, resulting in over a 151% speed enhancement, accelerating mission-critical processes.
- Oversaw a marketing team that grew a Twitter audience to 70k followers. Led an NFT sticker campaign, distributing branded stickers to ambassadors in major cities, sparking widespread social media engagement.

## PROJECTS

### MonopoLeaderboards | JavaScript, HTML/CSS, MySQL, Node.js

November 2023 – January 2024

- Developed a web application to record and track statistics for Monopoly games, featuring a Node.js backend and MySQL database.
- Designed and deployed a MySQL server to securely store and manage all game data and player information.
- Built a frontend for the Monopoly game using HTML, CSS, and JavaScript, integrating with the backend services for a seamless user experience.
- Configured the project for remote development and deployment using SourceSync and SSH configurations, handling both frontend and backend services across different servers.

### Open Data Service | Go, Chi Router, PostgreSQL, Logrus

February 2023 – Present

- Backend development for service, focusing on the “Applications” module, leveraging the Chi router and PostgreSQL for efficient data handling.
- Designed key CRUD operations for user applications, from registration to revocation.
- Enhanced error handling and logging using the Logrus library, ensuring system resilience and ease of debugging.
- Employed the Mockery library for rigorous testing, ensuring code reliability and robustness.

### Protein Folding Simulation | C, Pthreads, Performance Tuning and Analysis

February 2023 – March 2023

- Developed a program to calculate the maximum number of H-H contacts in a given n-length protein, exhaustively walking every possible protein fold.
- Enhanced performance by multithreading with PThreads and aggressively optimizing base code such that each n-length protein only needs to score  $3^{n-2}$  walks as opposed to the  $4^{n-1}$  walks in the original.
- Achieved notable speed improvements: a 12-character protein previously took 132.98s, while the optimized parallel version completed in just 0.0269s. On average, the optimized parallel program decreased runtime by over 99%.