HARRY HILLSDOWNLEY

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👤 he/him/his 📍 Cleveland, Quito

Education

Case Western Reserve University (CWRU) **Aug. 2022 – May 2026**
B.Sc./M.Sc. Computer Science (3.64 GPA); Minors: Mathematics *Cleveland, OH*

University College Dublin (UCD) **Sept. 2024 – Dec. 2024**
Computer Science Study Abroad Program *Dublin, Ireland*

Experience

Union Home Mortgage Corp. **May 2025 – Aug. 2025**
Artificial Intelligence Engineer Intern *Cleveland, OH*
- Designed tagging mechanisms based on vector embeddings and unsupervised learning to efficiently tag unstructured data
- Focused on containerization of services including creating APIs for interacting with ML and embedding models
- Collaborated on end-to-end system design for an automation project reducing 15hrs/week on human labor

ClearStaff Staffing Inc. **May 2023 – June 2023**
Data Entry Intern *Chicago, IL*
- Remodeled the existing contracts database by implementing three front-end features to enhance data logging efficiency by 35% and streamline operations.
- Utilized staffing database software to validate entries for over 6,000 employees, ensuring accuracy based on their working status.
- Collaborated with data entry teams to integrate contracts into the database, improving data management.

MC Interior Design **Jan. 2023 – Mar. 2023**
Project Manager *Quito, EC*
- Performed data visualization on existing project data to forecast overhead expenses for future projects, enhancing budgeting efficiency.
- Analyzed sales data to identify key development areas within the business, driving decision-making processes.
- Developed a customized front-end website for the company, improving user experience.

Technical Skills

Programming Languages: Python (3.6+), SQL, Java
Frameworks: Scikit-Learn, TensorFlow, Pandas, Flask, Scrapy
Technologies: SQL Workbench, Supabase, PostgreSQL, Docker
Languages: English (Native), Spanish (Native)
Relevant Coursework: Machine Learning, Data Mining, Databases, Cloud Computing, Algorithms, Data Structures

Projects

Volt Financial Newsletter 🌐 | *Python, Flask, PostgreSQL, Supabase, AWS EC2, Pandas* **Sept. 2024 – Present**
- Developed a web app using Flask for email collection and management, with PostgreSQL/Supabase for data storage.
- Automated Python scripts to scrape data, processed by AI models to generate content, with real-time data from market APIs.
- Deployed automation on AWS EC2 to run programmatically every Sunday, ensuring timely newsletter delivery.

Algorithmic Trading Project | *Python 3.10, Pandas, Scikit-Learn* **Dec. 2021 – Present**
- Developed a stock trading algorithm using Python 3.10 and the Pandas library, incorporating statistical models to identify trading opportunities based on historical data.
- Currently implementing real-time market watching by integrating the algorithm with a WebSocket API.
- Conducted extensive backtesting to validate the algorithm's performance across various market conditions.

Interests & Achievements

Data Society UCD
- Active member, participating in organization's workshops involving data mining, machine learning and data visualization.

Investors & Entrepreneurship Society UCD
- Active member, attending networking events across financial services industries and workshops on financial technologies and startups