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NATHAN CAREY

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EDUCATION

Boston, MA **Northeastern University** **Sept. 2019 – Present**

- Candidate for a Bachelor of Science degree in Computer Science, Minor in Physics (2024)
- Honors: Dean's List – GPA 3.6/4.0
- Relevant Coursework: Object Oriented Design, Database Design, Web Development, Theory of Computation, Algorithms and Data, Discrete Structures, Mathematics of Data Models
- Activities: NUHacks, HC Programming Challenges, Disrupt: Fintech, Campaign Canvassing

EMPLOYMENT

Software Engineer, Co-op **FacilityConneX** **June 2021 – Dec. 2021**

- Upgraded C# analytics to advanced Pandas-based Python framework resulting in a 40% reduction in codebase size while also adding additional alerting and custom detailed result messages.
- Built out dev tools to automate the production of XML files, YAML files, and LaTeX customer documentation based on analytics' Historian database tags and DataFrame columns.
- Deployed analytics to AWS lambdas with Pulumi and validated results against sanitized Apache Druid data.
- Developed algorithms with subject matter experts and translated them into commercially viable products.

Technical Consultant, Intern **Kearney** **April 2020 – June 2020**

- Consulted on IoT rollout for an international, multi-billion-dollar retail and eCommerce company.
- Researched software/technical architecture and performed market trend analysis.
- Prepared technical recommendations to aid in the progression of strategic architectural decisions.

PROJECTS

Depop Summary **Spring 2021**

- **Python Flask** based web application to create a summary of a given user's Depop products for sale.
- Leverages **Selenium** and **Beautiful Soup** to scrape data based on a given username and outputs a formatted summary webpage using **PostgreSQL** to store, and HTML Flask templates to display.
- Designed using **HTML/CSS** and **Bootstrap** frontend, deployed remotely on **Heroku**.

Music Critique **Fall 2020**

- Created a platform to allow artists and critics to interact, submit playlists, and leave critiques.
- Maintained an **SQL** database to control user login details, manage **CRUD** privileges for each user, and dynamically update database of songs as users submit new content.
- Driven by **JPA**, **JDBC**, and **ORM** interactions with a local MySQL database via Java application's CLI interface.

Number Recognition **Spring 2020**

- Initially a **Racket** script that measured and compared the Euclidian distance between given handwritten digits and a set of training data to return the closest match.
- Converted to a **Python** program using the MNIST database to learn and **Matplotlib** to visualize.
- Two approaches implemented – Simple approach with a trained **Scikit-Learn** Neural Network, and a Gradient/ Backpropagation approach using **NumPy** to manually train a small network and predict results.

TECHNICAL SKILLS

- Languages: Python, Java, SQL, HTML/CSS/JavaScript, PHP
- Frameworks & Tools: NumPy, SciPy, Pandas, Scikit, Flask, Selenium, PyEnv, PostgreSQL, MySQL, MongoDB, NodeJS, ReactJS, ExpressJS, Maven, JUnit, Spring Boot, Heroku, Bootstrap, AWS, Pulumi, Jira, Git, Linux/WSL

References available upon request