Winston Hackett

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Education

Brown University Providence, RI
Sc.B. in Computer Science *Sept 2020 – May 2024*

Related coursework: Deep Learning, Computer Vision, Linear Algebra, Computer Systems, Discrete Structures/Probability, Statistical Inference, Computer Graphics, Natural Language Processing, UI/UX, Embedded Systems, Data Science

Experience

Software Engineering Intern Summer 2023
Athletic Truth Group Online Coaching *Remote*

- Led the development of a NextJS based website to allow thousands of online clients to book in-person sessions with ATG strength coaches. Personally completed a majority of the initial app.
- Worked on all aspects of the T3 stack to create scalable database structures and query/update functions.
- Handled NextJS routing to coordinate multiple pages, including dynamic routing and user authentication.
- Utilized React Hook Form, Shadcn UI, and TanStack Table for well validated and attractive forms and tables.

Herbarium Software/Collections Intern Sept 2019-March 2020
University of Washington *Seattle, WA*

- Worked with a MySQL database handling over 400,000 specimens to fix image uploading and misplaced specimen records, aiding the digitization of the whole plant specimen collection.
- Assessed and troubleshooted bugs with an OCR library utilization, streamlining data entry of specimen labels.
- Identified plants using a large dichotomous key of all native plants in Washington State, adding to the collection.

Projects

AI Native Plant ID | *Tensorflow, Python, Git* Fall 2022

- Developed a Tensorflow model that distinguishes 10 Washington State native plant species' images with over 80 percent accuracy.
- Wrote scripts to resize and organize hundreds of plant images from crowdsourced INaturalist data into a Tensorflow compatiable dataset, providing high quality and unique data.
- Iteratively designed CNN model, including regularization and preprocessing, to achieve high accuracy while optimizing train time.

Native Plant Web Scraping | *Python, Beautiful Soup, Mechanical Soup* Summer 2022

- Utilized Beautiful Soup and Mechanical Soup libraries to scrape University of Washington Herbarium website to find which plants were most commonly collected, creating a ranked list of common plants.
- Wrote another script to scrape UW Herbarium website for images and descriptions of most common plants, to provide labels for the ranked list of plants.
- Collected data of most common plants into a single excel sheet and imported data into Anki software to create flashcards. The flashcards helped me study quickly and recognize many more plants on hikes.

Language Learning Game | *Unity, C#, Git* Summer 2022

- Won a Brown University grant to develop a Unity project that provides interactive language learning through conversing and interacting with characters and places. First demo helped friends learn basic Chinese.
- Prototyped experience with paper cutouts to hone in on the user experience and set a development plan for associated features.
- Collaborated with a team of student artists, programmers, and designers to bring in expertise and progress quickly.

Technical Skills

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS
Frameworks: React, NextJS
Developer Tools: Git, Google Colab, VS Code, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib, Beautiful Soup, Mechanical Soup, React Hook Form, TailwindCSS, Tanstack Table, OpenGL, LWJGL