Steven Rud

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EDUCATION

Brandeis University   Waltham, MA, USA

BS, Computer Science   *Aug 2020 - Dec 2023*

I've always admired Mathematics and the Sciences, with a particular focus on Biology, for their intrigue, purity, and application in the world. I have culminated my interest in these two fields into the study of Computer Science. So, at Brandeis I have undergone a heavy workload in Computer Science, studying Algorithms, Data Structures, Machine Learning, Natural Language Processing, Operating Systems, Data Science, and general software engineering techniques. I have as well done a lot of work in Biology, studying Genetics and Genomics, Honors General Chemistry, and General Biology Lab.

Some Relevant Coursework

- **Fundamentals of Software engineering:** Learned the construction of large bodies of software using modern software engineering practices.
- **Fundamentals of Natural Language Processing:** Studied the natural language understanding and the theory and practice of current computational linguistic systems.
- **Fundamentals of Artificial Intelligence:** An Introduction to Lisp and heuristic programming techniques through planning natural language processing and computer vision.
- **Data Structures and the Fundamentals of Computing:** Focused on the design of algorithms and the most widely used data structures employed in solving commonly encountered problems.

PROJECTS

Species Genome Analysis and Animal Group Predictor

[Genome Analysis GitHub Repository](#)

- This project conducts species genome analysis using machine learning, Bioinformatics, and Data Science techniques. It parses genomic sequences into K-mers, analyzes codon frequencies, and trains a model to classify species and predict animal groups. Visualizations like heatmaps and classification reports support the analysis. The model successfully identifies the species of two mystery genomes, showcasing its capability with unknown data.

LEGO Set Finder Website

[LEGO Website GitHub Repository](#)

- This website, developed using JavaScript and MongoDB for data storage, serves the purpose of assisting users in locating LEGO sets. It offers a range of filters to facilitate searching and allows users to keep track of sets they want and those they already own.

Letterboxd Top 4 Movie Generator & Yearly Movie Data Analysis

[Movies GitHub Repository](#)

- This Full-Stack project was created with a Python backend and a React.js frontend with Flask and Dash libraries to create a web application that provides users with a personalized top 4 selection of their top-rated movies on Letterboxd, along with a data analysis feature showcasing the top 4 movies and the average ratings over the years.

WORK EXPERIENCE

ASDAN Volunteering   Tel Aviv, Israel

Peer Mentoring Volunteer / Teaching Assistant   *Sep 2018 – Mar 2020 (170 Volunteering Hours)*

- Assisted 8th and 11th grade students one-on-one and in small groups helping them improve their math skills. Reinforced classwork presented by the teacher, helped with homework, and prepared students for tests.

SKILLS

Languages: Python, Java, JavaScript, HTML/CSS, SQL

Frameworks: Node.js, React, Flask, Junit

Developer Tools: Git, MongoDB, VS Code, PyCharm, Eclipse, JupyterLab, Bash, PowerShell, Microsoft Programs

Libraries: Pandas, NumPy, Matplotlib, PyTorch, Scikit-learn, Seaborn, Plotly, Beautiful Soup, Scipy, Keras, SeqIO

Soft Skills: Problem Solving, Analytical Skills, Communication, Teamwork, Quick Leaner, Adaptability, Creativity

Spoken Languages: English (Native), Russian (Native), Hebrew (Intermediate Proficiency)