Richard Hausman

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Education

Yale University (New Haven, CT), 2020-2024
The Horace Mann School (Bronx, NY), 2015-2019
Final GPA: 3.95
SAT Subject Tests: 780 Biology (M) (Oct. 2016), 800 Chemistry (Aug. 2017), 800 Math II (June 2018)
ACT: 36/36 (May 2018)
Advanced Placement (AP) Tests : 5 Computer Science A (June 2018), 5 Calculus BC (June 2019), 5 Physics (Mechanics) (June 2019), 5 Physics (Electricity and Magnetism) (June 2019)

Research and Employment

The Not Company - Machine Learning Intern (Jan-March 2020), **Data Scientist** (April 2020-present) - Works with cutting-edge generative machine learning techniques to improve the recipe generation models. Skills used include: training models on remote, GPU-enabled machines, using Amazon Mechanical Turk, and dockerizing and deploying models using Kubeflow. Also works with recipe ranking algorithms, data cleaning, and generating feature-rich embeddings.
Role Lab of Neurobiology and Behavior (Summer 2018) - Used immunohistochemical techniques in mouse to map cholinergic projections from Basal Forebrain Cholinergic Nuclei to the Somatosensory cortex and Basolateral Amygdala in order to strengthen our understanding of the formation of fear association memories.
Strang Lab of Apoptosis and Cancer Biology (Summer 2017) - Elucidated the mechanisms of Tankyrase in the degradation of Axin and the proper function of the Beta-catenin Wnt signalling pathway in *Drosophila melanogaster*. Used CRISPR to introduce transgenes to the *Drosophila,* then used multiple *in vitro* and *in vivo* techniques to identify critical binding residues on Tankyrase.

Clubs/Extracurriculars

Fellow at Yale Entrepreneurship Society (2020-)
Fellow at Helix Incubator (2020-)
Member, Yale Undergraduate Aerospace Association (2020-)
Yale Symphony Orchestra, Horn (2020-)
Yale Glee Club, Bass (2020-)
Editor-in-Chief of *Spectrum,* Horace Mann's science publication (2018-19)
President of APSIS Aeronautics, Horace Mann's Rocketry Club (2018-19)
Co-President and Co-Founder of NYC Interfaith Alliance (2018-19)
Co-President of Horace Mann Winds Ensemble (2018-19)
Grade Representative on Youth Board of Temple Shaaray Tefilah (2015-19)
CPR and Lifeguard Certified (2019)
Programming Languages: Python, Java, C++, MATLAB, OpenSCAD, LaTeX, HTML, Javascript.
Member of Horace Mann FRC Robotics Club (2016-2018)

Selected Side Projects

Personal Website, richard-hausman.com (HTML, CSS, ReactJS, Django, Firebase) - A dynamic and modular personal website, with sections for an introduction, for my work experience, and for blog posts. The website is hosted with Firebase, and the backend (which serves the blog posts) is a REST API made with Django and securely exposed.
HandEditor (Python) **-** Uses a Convolutional Neural Networks implemented with PyTorch to detect hand signals in a video. These hand signals are then used to automatically cut "bad takes" out of the video. This project is still in progress.
Picoup (Python) **-** A program which takes in several images (one of which is designated the "main" image) and produces a picture-collage of user-specified size which, in its entirety, resembles the main image.
GifTran (HTML,CSS,Flask/Python) - A Flask web app which performs sentiment analysis on a picture of the user (or user-entered sentiments) using the Google Cloud Vision API, then provides related gifs. Created with a team at Pennapps Hackathon 2017.
Handrating (Swift) - An iphone app which performs OCR on the user's handwriting, then compares the result to what the user actually wrote. The difference between the user-intended message and that identified by the app serves as a measure of the handwriting's quality. Created with a team at HackMann Hackathon 2017.
HomeAuto (C++ Arduino) - A home-automation prototype using an internet-enabled Arduino microcontroller and an assortment of hardware, from servo motors to strobe lights, to automate or allow remote completion of a variety of household tasks.
Assorted 3D Models (OpenSCAD) - Used OpenSCAD to programmatically create a variety of parameterized, 3D-printable objects. These objects were primarily created for use in the robots of Horace Mann's FRC Robotics team.

Honors

Simons Summer Research Program Fellow - Role Lab of Neurobiology and Behavior (Summer 2018)
Rockefeller University Summer Science Research Program Fellow - Strang Lab of Apoptosis and Cancer Biology (Summer 2017)
Honors in Science, Math, Computer Science, Robotics, and Music - The Horace Mann School (2019)
National Merit Semifinalist (2018)
AP Scholar (2019)