Jonathan Yin

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Education

Yale University *Sept. 2020 - May 2024*

Double major in Computer Science and Statistics & Data Science, GPA: 4.0/4.0

- Selected coursework: Artificial Intelligence (CS 570), Computational Vision (CS 475), Machine Learning (S&DS 265), Systems Programming (CS 323), Data Structures (CS 223), Discrete Mathematics (MATH 244), Probability Theory (MATH 241)
- Activities: Yale Computer Society Development Team, Yale Machine Learning, YHack Logistics Team

Experience

Benchling *Jun. 2022 - Aug. 2022*

Incoming Software Engineering Intern

Octant *Jun. 2021 - Aug. 2021*

Software Engineering Intern

- Experimented with deep learning models to predict retention time of molecules used to determine reaction yield
- Integrated and deployed model into existing quality-control pipeline for drug synthesis
- Developed tool to visualize and interactively explore high-dimensional molecular features

Beagle Learning *Jul. 2020 - Aug. 2020*

Software Engineering Intern

- Developed front-end for inquiry-based online learning platform in React, Redux, JavaScript, HTML, and CSS
- Worked in an agile environment with daily product stand-ups and pair programming sessions

Broad Institute of MIT and Harvard - Regev Lab *Jan. 2019 - Dec. 2020*

Computational Biology Researcher

- Worked on improving GPCR binding prediction with compressed sensing, Bayesian methods, and machine learning
- Developed novel deep learning architecture to create more accurate latent molecular representations

Conference Presentations

Learning Meaningful Representations for Life *Dec. 2020*

Neural Information Processing Systems (NeurIPS) 2020 workshop

- Yin J*, Chung H*, Regev A. *A multi-view generative model for molecular representation improves prediction tasks* (paper)
- Combined multi-view representation learning with VAEs to improve latent molecular representations (talk)

Projects

Food.AI (github.com/jonathanyin12/Food.AI)

hackathon project

- Enables simple calorie tracking on mobile devices using real-time object detection for various food classes
- Utilizes a MobileNetV2 SSD architecture trained with transfer learning on the Open Images v4 dataset

PokémonGAN (github.com/jonathanyin12/PokemonGAN)

personal project

- Generative adversarial network that synthesizes novel Pokémon from random latent noise
- Implemented in Keras using a modified DCGAN architecture

Honors & Awards

Learning Meaningful Representations of Life - Selected oral presentation at 2020 Neural Information Processing Systems (NeurIPS) workshop *Dec. 2020*

MIT Program for Research (PRIMES) - Selected to year-long research program for high school students through the MIT Department of Mathematics *Jan. 2019*

3x American Invitational Math Exam Qualifier - highest score of 7 (top 0.5% of all testers) *Mar. 2018 - 2020*

USA Computing Olympiad - Gold Division (penultimate division; out of 7,500 participants) *Jan. 2019*