Raymond He

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EDUCATION

Carnegie Mellon University, PHL, United States 2024-Present
B.S. in **Information Systems** (Current mid semester QPA: 4.0)
Relevant coursework: Principles of Imperative Computation (15-122), Functional Programming (15-150), Concepts of Mathematics (21-127), Intro to Data Structures (15-121), Reasoning with Data (36-200), Information Systems Milieux (67-250)

Concord Academy, MA, United States, Grades 9-12 2020 – 2024
- GPA: 3.98/4.0 (unweighted)
- SAT: 1570 (Evidence-Based Reading and Writing 780; Maths 790)
- AP: Calculus BC (5), Calculus AB (5), Computer Science A (5), Physics C: Mechanics (5)

Academic Honors and Distinctions
- **Gold Division, USACO (United States of America Computing Olympiad)**, Grade 11
- AP Scholar with Honor Award, July 2023
- Physics Bowl Division 1, 2021 (score 29/40) (~top 200 of Global Scorers)

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, SQL, JavaScript/HTML/CSS
Tools: Shell, Linux, GCP, AWS, Git, PyTorch, TensorFlow, Scikit-Learn, Pandas, Numpy, Scipy, MySQL, PostgreSQL

EXTRACURRICULAR ACTIVITIES

Research: ***Enhanced Predictive Power: Hybrid Stacking Classifier for Better Diabetes and Prediabetes Prediction*** May 2024 - September 2024
- Used **deep neural network** approach and **XGBoost** and **LightGBM** to create a dual stacking classifier to better predict the existence of diabetes and prediabetes in patients based on biometrics.
- Implemented architecture with **Pandas** and **PyTorch** and trained models using distributed training with 4
- NVIDIA RTX 3090 GPUs and achieved 83% score accuracy.
- Gained competency with techniques like **NVLink**, **NCCL** and **CUDA**.
- Summarized findings with a 25 page article

Game Creation Society at Carnegie Mellon University, *Programmer* August 2024 - Present
- Create a 2D platform fighter game using **Github**, **Unity**, and **Godot** (**C#** and **python**) and collaborate with 10 team members.
- Developed character with fully animated attacks, specials, aerials, and ultimate abilities.
- Gained hands-on experience with Unity, Godot, and animation.

CIA Buggy at Carnegie Mellon University, *Data Analyst* August 2024 - Present
- Use **python** and **arduino firmware** (GPS) to track, optimize, and analyze buggy paths in practice and competition runs.
- Convert raw .ubx data and perform **RTK (Real-Time Kinematic)** to improve precision and kinematic calculations using **Akima1DInterpolator** from **SciPy**.
- Generate visualizations using **Matplotlib** and other data analysis tools.

Asociación Brali IAP, *Lead UI/UX designer and backend engineer* Sep. 2022 - 2024
- Brali is a Mexican local charity in Querétaro, Mexico that helps local less fortunate children by providing them with education

- Managed and designed Brali's website and social media presence, according to requests from the official board of the Association of Brali.
- Taught **HTML** and WordPress to collaborators throughout the process

Programming Club, *Head* Sep. 2022 - 2024

- Spearheaded small **computer vision** projects such as creating a real-time mask detection model, e.g. Y**OLOv9, Faster R-CNN** and a grid game using **deep Q-learning** model
- Lead group meetings weekly, with topics including **USACO**, **GPT** models, **Transformer**, **BERT** etc.

STEM Council, *Leader* Sep. 2021 - 2024

- Created and oversaw the STEM Buddy project at CA
- Paired STEM leaders and experienced students with students interested in STEM
- Organized STEM club collaborations across school

Engineering Summer Academy at UPenn, *Student* June 2022

- Grade: A
- Collaborated with Professor Mark Yim in the robotics program
- Built a robotic orchestra capable of playing music synchronously, including drum set, piano, guitar/bass, and recorders

Programming Sep. 2020 - Present

- Learned Python on my own in 9th grade
- Took lessons to learn C++ in 10th grade
- Took Big Data, Object Oriented Programming classes at Concord Academy
- Learned Blender in 11th grade for animation and 3D modeling
    - Partook in the creation of an app for a virtual guided tour at Concord Academy