Peter Hong

Objective: Driven high school student with experience in computer science, research, writing, economics, and entrepreneurship seeking to apply both technical and managerial skills to drive concrete change at scale.

Personal Website: https://peterhong-me.github.io/home/
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Education

Canyon Crest Academy
San Diego, CA . August 2018 to June 2022
GPA: **4.66/4.0** (weighted/unweighted 10-12)

Advanced Coursework:
STEM: AP Calculus AB, AP Calculus BC, AP Computer Science Principles, AP Computer Science A,
AP Physics 1, AP Physics 2, AP Physics C: Mechanics, AP Physics C: Electricity and Magnetism,
AP Statistics, Math Honors, Honors Chemistry

Humanities/Social Sciences: AP Microeconomics, AP Macroeconomics, AP World History, AP US History,
AP Government, AP English Language and Composition, AP English Literature and Composition,
Advanced Journalism, English Honors

San Diego State University
San Diego, CA . Spring 2022
Multivariable Calculus (Calculus III), Linear Algebra

The LEAGUE of Amazing Programmers
San Diego, CA . April 2020
- Took classes in computer programming (Java) and created personal games and projects

Institute of Electrical and Electronics Engineers
San Diego, CA . October 2020-Present
- Student member of IEEE and IEEE Computer Society

Online Courses:
- **Machine Learning Coursera**
  Stanford University . April 2021-June 2021
- **Introduction to Programming with Python and Java Coursera**
  University of Pennsylvania . June 2020-August 2020
- **LaTeX Tutorials**
  YouTube . May 2020 to November 2020

Awards and Honors

- Co-Author of Manuscript Published at IEEE 2nd International Conference on Transdisciplinary Artificial Intelligence (TransAI)
- Co-Author of Manuscript Published in Inaugural Issue of Brainiacs Journal of Brain Imaging and Computing Sciences
- Invited for publication in internationally renowned journal Advances in Science, Technology and Engineering Systems Journal (ASTESJ)
- Invited presenter to BHAVI December 2020 Symposium
- Top 25 Team in Wharton Global High School Investment Competition (Region 3)
- First Place Award in BHAVI BibTeX Parser Hackathon (Speed Competition)
- UC ELC Scholar (Top 9 Percent of Students at CCA)
- Freshman Athletic Award (CCA Ravens Basketball)
- Designated applicant and finalist for Simons Summer Research Program
- Accepted to San Diego Supercomputer Center REHS Program
- Accepted to Whatever It Takes (WIT) program with scholarship
- Accepted to UCSD MAP Research Mentorship Program

Projects

NPDSLINKS: Nexus-PORTAL-DOORS-Scribe Learning Intelligence aNd Knowledge System

Brain Health Alliance Virtual Institute Team Project • July 2020 to September 2020

- Co-wrote 4-page research paper introducing LINKS applications with focus on algorithms and analysis of data
- Updated NPDS cyberinfrastructure with definitions and standards on quality metrics to evaluate data records
- Paper presented at international peer reviewed 2nd International Conference on Transdisciplinary Artificial Intelligence (TransAI) and published at IEEE Xplore

Survey, Analysis, and Requirements for Semantic Enhancement to Support Machine Understanding of Scientific Literature

Brain Health Alliance Virtual Institute Team Project • October 2020 to December 2020

- Co-wrote 9-page research paper proposing a novel semantic enhancement workflow process
- Conducted literature survey on status of semantic web for brain sciences/health and proposed implications of survey findings
- Paper published in peer reviewed inaugural issue of Brainiacs Journal of Brain Imaging and Computing Sciences

NPDS Cyberinfrastructure Ontologies to Support Clinical Trials for Neurodegenerative Disorders

Individual Project • June 2020 to January 2021

- Independently wrote 4-page research manuscript detailing an ontology for neurodegenerative disorders
- Developed ontology outlining relationships between brain diseases using Protégé software and OWL/RDF

Sachen: a tool solving organization and memory problems within any context

Team Project for Hackathon • October 2020 to November 2020

- Developed advanced computer vision algorithms to help everyday individuals find the location of any items
- Designed software workflow pipeline from an RFID reader to C++/Python to Flask

Extracurricular Activities

Brain Health Alliance Virtual Institute: Researcher and Team Lead

May 2020 to January 2021 **.** *Ladera Ranch, CA*

- Worked under the mentorship of Dr. Carl Taswell, MD, PhD and Mr. Koby Taswell to complete multiple research projects in the fields of computer science, semantic web/knowledge engineering, data science, and biomedical engineering
- Co-authored two research manuscripts for publication in IEEE TransAI 2020 and Brainiacs Journal of Brain Imaging and Computing Sciences
- Led student meetings and participated in weekly mentor meetings
- Conducted literature reviews on semantic web, knowledge engineering, and neurodegenerative diseases
- Designed OWL 2.0 ontology outlining symptoms of Alzheimer's disease, different types of Dementia, and included other neurodegenerative diseases
- Spearheaded a team of 3 to create the fastest running BibTeX parser using C# in Visual Studio Code
- Completed quarterly reports and advanced quarters in summer, fall and winter

Fusion Insider: Founder and Editor-in-Chief

March 2020 to Present **.** *San Diego, CA*

- Founded online publication covering business and technology topics
- Utilize Squarespace and Google Analytics to track over 8,500+ viewers
- Manage website and organization email and serve as head of recruitment
- Supervise tasks and deadlines of over 25 staff writers and oversee editing process

CoastalHacks Hackathon: Co-Organizer

June 2021 to Present **.** *Virtual*

- Co-founded a virtual hackathon competition offering students internationally an opportunity to learn computer programming skills, compete against peers, and thrive in a community of like-minded students with several free workshops
- Led sponsorships team to acquire over $46,000 in prizes and partnerships with both local businesses and large companies by cold-emailing
- Helped advertise hackathon to acquire hundreds of signups from student hackers

UC San Diego Department of Economics: Research Assistant

June 2020 to August 2020 **.** *San Diego, CA*

- Compiled a large dataset of roughly 3,500 data entries using Google Spreadsheets and inspected large volumes of data sheets to select relevant information
- Worked with UCSD Economics PhD Candidate Radhika Goyal on digitizing Indian Census data for a project studying the impact of local jurisdiction size and the distance of village headquarters on the provision of local goods

CCA Pulse Magazine: Staff Writer and Online Editor-in-Chief

August 2019 to January 2021 **.** *San Diego, CA*

- Built and trained a team of new mentors to teach girls computer science at two local middle school chapters.
- Connected with female college engineering students and industry engineers, inviting them to share their experiences with club members
- Manage individual deadlines of CCA Pulse online for all writers on staff

Raven Investors: Founder and Team Leader

September 2019 to Current **.** *San Diego, CA*

- Compete in the Knowledge@Wharton International Investment Competition
- Implement creative investment strategies evident in our mid project and final reports
- Led team to write 8-page reports for submission

Personal Stocks Portfolio: Manager

October 2018 to Current **.** *San Diego, CA*

- Buy and sell stocks with a long-term approach and maintain knowledge about current events
- Apply technical and fundamental analysis to trades in the market

Volunteer Work

Master Sports Youth Basketball League: Head Basketball Coach

March 2018 to Present **.** *Carmel Valley, CA*

- Ensure that all players are treated fairly while improving basketball skills
- Organize intense weekly practices and remind parents of upcoming games on a regular basis

CCA Integrated Math 1 Honors (Precalculus Honors): Teacher Assistant

August 2021 to Present**.** *San Diego, CA*

- Assist in grading homework, quizzes, and tests
- Help students with questions

EduSTEM Initiative: Regional Director

June 2020 to Present **.** *San Diego, CA*

- Founded a new chapter of the EduSTEM Initiative
- Spearheaded novel STEM curriculum for all chapters

Semantic Web Research: Research Advisor

April 2021 to August 2021 **.** *Virtual*

- Advised a student on specific tools and technologies used within computational science research
- Introduced traditional research pipeline and answered any questions student had

Personal Basketball Skills Trainer

June 2018 to Present **.** *San Diego, CA*

- Develop personalized workouts for youth basketball players in the Carmel Valley area
- Instill confidence in younger players' mentalities