

Brandon Ho

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EDUCATION

- **University of California, San Diego** La Jolla, CA
Bachelor of Engineering in Computer Engineering; Junior Standing Aug. 2020 – Present
- **Westview High School** San Diego, CA
High School Diploma; GPA: 4.49 Aug. 2016 – June. 2020

EXPERIENCE

- **Bae Research Group** UCSD Department of NanoEngineering
Research Assistant Aug 2020 - Present
 - **Literature exploration and analysis:** Searched through science journals to find relevant information to lab studies and personal project. Self-learned emerging field of hydrogel mechanics.
 - **Lab Communication:** Attended and contributed to weekly lab meetings. Communicated with graduate students to understand field of research (Hydrogel Bioelectronics).
- **FIRST Robotics Team (FTC #8742)** San Diego, CA
Outreach Executive, Hardware Executive Aug 2016 - Aug 2020
 - **3D Modeling:** Used 3D modeling environment, AutoDesk Inventor, to design numerous chassis and functional attachments, primary 3D designer on the team.
 - **OpenCV:** Utilized OpenCV library for on-bot image recognition for autonomous robot functionality.
 - **PID Control:** Proportional–integral–derivative controller, a feedback control loop mechanism used to more accurately control robot maneuvers. Developed PID control for robot with encoder counts and gyro.
 - **Machining:** Extensive experience with all types of technologies used in metal manufacturing/machining and junior experience with CNC.
 - **Outreach:** Planned, organized, and executed large-scale robotics outreach events over 4 years, reaching out to over 500 students in the community.
 - **Grant Writing:** Wrote and presented several grant applications to the local Town Council to support outreach program, earning over \$800 to expand the program.
- **Boy Scouts of America** San Diego, CA
Eagle Scout, Senior Patrol Leader June 2014 - Present
 - **Agenda Planning:** Created and executed weekly meeting agendas to push forward growth and development opportunities to Scouts. Helped to plan, organize, and execute the outings calendar.
 - **Leadership and Personnel Management:** Execution of large meetings and campouts with many personnel. Led the detailed execution of Eagle Project with a smaller group of associates.
 - **Woodworking:** Lead a group of associates to build large-scale wooden structure with interior design as part of Eagle Project. Experienced with milling and construction.

PROJECTS

- **PersonAI Chat:** AI Chatbot with Customizable Personas (backend for chat site, ProfessorUWU). Implemented TensorFlow with OpenAI GPT's Transformer-based language model on custom dialogue datasets to create custom personas for users to chat with.
- **Overcooked:** Cooking virtual experience with an emphasis in smooth animation and object collision.
- **Doodle:** Multi user drawing-charades environment with an emphasis on server-client communication. Utilized primitive data encryption/decryption and UI development with JFrame.

COURSEWORK

- **CS50AI:** CS50's Introduction to Artificial Intelligence with Python **Issued:** HarvardX, July 2020
- **PH526x:** Using Python for Research **Issued:** HarvardX, June 2020

SKILLS

- **Programming Languages:** Python, Java, HTML, C++ **Technologies:** Adobe, AutoDesk, AWS