Alex S. Huang

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EDUCATION

◆ **University of Texas at Dallas,** Erik Jonsson School of Engineering **Expected 05/2029**
Bachelor of Science in Electrical Engineering
- Cumulative GPA: 4.0/4.0 | Hobson Wildenthal Honors College

◆ **Hamilton High School |** Chandler, AZ **05/2025**
- Weighted GPA: 4.8/4.0 | Summa Cum Laude | National Merit Scholar | ISEF International Finalist

EXPERIENCE

◆ **University of Texas at Dallas |** Richardson, TX **08/2025 – Present**
◇ **Intelligent Robotics and Vision Lab,** *Robotics Research Assistant*
- Fine-tuning bimanual **Koch v1.1** robot-vision pipeline w/ imitation & reinforcement learning for assistive tasks.
- Training model with **Open-X** dataset and **Nvidia Isaac** simulations to increase policy generalization by **up to 5x.**

◆ **Arizona State University |** Tempe, AZ **05/2024 – 07/2025**
◇ **Sun Robotics Lab,** *Intelligent Robot Dynamics & Actuators Intern* *09/2024 – 08/2025*
- Engineered **image segmentation** AI & RL pipeline of real-time finger-angle classification for robotic hand teleoperation with **DeepLabV3**, **MobileNetV2**, and **openCV**, **reducing costs by 90%** vs. existing solutions.
- Refined robotic hand, adding extra thumb DOF with custom CAD, soldering and servo-spring modifications.
- Accepted into & presented paper at the **2025 IEEE ICEET conference**, will be published into IEEE Xplore.
◇ **Security Engineering for Computing Lab,** *Cybersecurity/SWE Intern* *06/2024 – 08/2024*
- Built SmishSmashing, a GPT4-powered extension designed to counteract smishing attacks; integrates **Twilio** for SMS parsing, **MongoDB** for storage, and **AWS EC2** for deployment. Improved **smishing detection by 60%**.

◆ **Stanford University |** Palo Alto, CA **06/2024 – 08/2024**
◇ **Stanford Compression Forum (SCF),** *STEM2SHTEM Summer Research Intern*
- Selected as **1 of 30 high school students worldwide** to partake in STEM/AI research with Stanford professors.
- Co-authored paper on **prompt engineering** that improved **LLM decision-making by** 80% w/ **Prof. Ben Roy.**

◆ **Taiwan Overseas Community Affairs Council|** Nantou, Taiwan **07/2023 – 08/2023**
◇ **English Teaching Service Program for Overseas Youth,** *English Teacher/Volunteer*
- Drafted & taught **4 weeks** of bilingual, hands-on English, STEM & arts curricula in a team of 6 at a rural school

ACTIVITIES

◆ **Accessible Prosthetics Initiative - UTD Chapter** **09/2025 – Present**
Electronic Arm Team Member
- Utilizing **KiCAD** and **Multsim** to prototype robotic arm PCB and custom EMG-signal-processing pipeline for **50%+ performance from last year** with electronics team for the 2025 Dallas Abilities Expo.

◆ **Robotics - Hamilton High Microbots Team 698** **08/2021 – 05/2025**
Head of Marketing Operations, Secretary, Mechanic
- **Fundraised $15,000+** w/ marketing team annually. Collaboratively **design** & **assemble** cost-efficient competition robots

SKILLS & INTERESTS

Programming: Python, C++, JavaScript, MATLAB, Bash
Software Tools: GitHub, API integration, MongoDB, AWS, machine learning, Canva, MS Office, Google Suite
Hardware: Shop/power tools, soldering, Arduino, 3D printing/assembly, CAD (Fusion/OnShape), KiCAD
Languages: English (native), Mandarin (native), Spanish

Interests: Robotics, PC building, chamber music, national parks, cooking, fantasy football, pickleball, weight training

AWARDS & HONORS

◆ ISEF National Finalist & AzSEF Best of Fair
05/2025
◆ UT Dallas full-ride National Merit Scholarship Recipient
04/2025
◆ National Merit Finalist (top ~0.6% PSAT scorer)
02/2025
◆ InnerView Service Ambassador Award (300+hrs)
12/2024