

Alex S. Huang

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EDUCATION

◆ **University of Texas at Dallas, Erik Jonsson School of Engineering** **Expected 05/2028**
Bachelor of Science in Electrical Engineering

- **Cumulative GPA: 4.0/4.0** | Hobson Wildenthal Honors College | Full-Ride Scholarship
- Linear Algebra, Differential Equations, Calculus I - III, Statistics, Digital Systems, Physics I & II, Java/C++

EXPERIENCE

◆ **University of Texas at Dallas | Richardson, TX** **08/2025 – Present**

◇ **Intelligent Robotics and Vision Lab, Robotics Research Assistant**

- Fine-tuning **SO-101 gripper** & robot-vision pipeline for teleoperation and zero-shot generalization of assistive daily tasks.
- Creating replicable task-benchmarking dataset to increase **VLA** (Vision-Language-Action) policy success **up to 40%**.

◆ **Arizona State University | Tempe, AZ** **06/2024 – 07/2025**

◇ **Sun Robotics Lab, Intelligent Robot Dynamics & Actuators Intern**

09/2024 – 08/2025

- Engineered **image segmentation** & reinforcement-learning pipeline of finger-angle estimation for robotic hand teleoperation using **DeepLabV3, MobileNetV2, and openCV** in **Python, reducing costs by 90%** vs. existing solutions.
- Refined robotic hand, adding extra thumb DOF with custom CAD, soldering and servo-spring modifications.
- 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 **Python** app designed to counteract smishing attacks; integrates **Twilio** for SMS parsing, **MongoDB** for storage, and **AWS EC2** for deployment. **Optimized detection-to-response time to <5s.**

◆ **Stanford University | Palo Alto, CA** **05/2024 – 08/2024**

◇ **Stanford Compression Forum (SCF), STEM2SHTM 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

◆ **Institute of Electrical and Electronics Engineers (IEEE) - UTD Chapter** **09/2025 – Present**
Solid-State Circuit Society (SCSS)

- Learning basic **CMOS VLSI design** to fabricate traffic light microcontrollers using **Cadence Virtuoso.**

◆ **Accessible Prosthetics Initiative - UTD Chapter** **08/2025 – Present**
Electronic Arm Team Member

- Utilizing **KiCAD** and **Multisim** to prototype robotic arm PCB and custom EMG signal-processing device for **50%+ performance from last year** with the 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 robots.

SKILLS & INTERESTS

Programming: Python, C++, Java, HTML, MATLAB

Software Tools: GitHub, API integration, MongoDB, AWS, Python machine learning, Canva, MS/Google Suite

Hardware: Shop tools, soldering, Arduino/ESP32, 3D printing, CAD (OnShape), PCB design (KiCAD/Altium).

Languages: English (native), Mandarin (native), Spanish

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

AWARDS & HONORS

◆ ISEF International Finalist **05/2025**

◆ UT Dallas National Merit Scholarship **05/2025**

◆ Arizona Science Fair 1st Place & Best of Fair **04/2025**

◆ CUSD IMPACT Scholarship **03/2025**

◆ InnerView Service Award (300+hrs) **12/2024**

◆ Arizona Science Fair 2nd Place **04/2024**