

Barron Ha

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EDUCATION

Georgia Institute of Technology, Atlanta, GA *August 2024 – June 2027 (Expected)* • Bachelor of Science in Biomedical Engineering • U.S Citizen *GPA: 4.00/4.00*

PROJECTS

Adaptive Fabric Cutter for One-Handed Use, Georgia Tech, Atlanta, Georgia *August 2024 -* • With a group of six, I am currently creating a fabric-cutting device for quilters with one-sided weaknesses/paralysis. • Gone through the skills of using Solidworks to prototype the product and mechanical skills such as 3D printing, metalwork, and laser cutting to design the fabric cutter.

Accessible Prosthetics Initiative, Georgia Tech, Atlanta, Georgia, *August 2024 -* • As a member of API's production team, my current project is building an eNABLE v3 Phoenix Hand • The final mission is to design and create prosthetics with maximum clinical impact that are accessible and affordable. • This project requires proficiency in Python, Solidworks, 3D printing, and electronics, including soldering and circuit design

EXPERIENCES

Georgia Tech, Undergraduate Researcher, Atlanta, GA *December 2024 –* • Researching under Andres Garcia, head of Georgia Tech's Biotechnology Department • Researching how to use hydrogels to deliver stem cell-derived islets under the skin • Quantifying the cell survival and vasculature of the samples to test the success of the method • Partaking in sectioning staining, imaging, and quantifying the samples from mice.

Polygence, Research Assistant, Alameda, California (Hybrid) *May 2023 – September 2023* • Published a research paper that was peer-reviewed by Jerry Jose, a NY medical school student • Conducted a review of 60+ clinical studies evaluating the effectiveness of specific nutrients in reducing muscle recovery time and countering metabolic decline associated with aging. • Investigated the physiological changes in skeletal muscle anatomy and function due to aging, including the effects on myofibrillar interaction, satellite cell activity, and excitation-contraction coupling. • Presented findings that demonstrated the potential of targeted nutrient supplementation to extend physical endurance, and improve the overall quality of life for aging individuals.

FACES For The Future Coalition, Medical Intern, Alameda, CA *November 2022 - August 2023* • Clinical exposure done by shadowing healthcare professionals to learn about their job duties and functions • Was taught health career prep curriculum, going over hospital ethics, HIPAA regulations, proper PPE donning and doffing, and professionalism

Youth Advisory Council, Alameda, CA *October 2023* • Worked with other teens to provide a perspective on how young adults can become more involved in the healthcare industry • Currently helping set up fundraisers for FACES and personalized career guidance to high-schoolers/first-generation students/underserved communities.

Yale Young Global Scholar, Scientist, New Haven, Connecticut, *June 2023 – July 2023* • Selected for the "Innovations of Science and Technology" track • Developed a research capstone project focusing on CRISPR Cas-9 and its usage in potentially treating Type 1 Diabetes. • Presented project to a distinguished audience of top high school students and current Yale undergraduate/graduate students.

LEADERSHIP & COMMUNITY ENGAGEMENT

TOM (Tikkun Olam Makers), Georgia Tech, Atlanta, Georgia *August 2024 -* • Utilizing and creating affordable solutions to address neglected needs of people living with hardships
• Conducting user-focused research to identify specific challenges and refine solutions for greater accessibility and impact.

Green Grass Learning Center, Georgia Tech, Atlanta, Georgia *June 2020 – March 2024* • Tutored students from diverse backgrounds in English, math, and science. Assisted by being a proactive leader towards these students to help solve problems and inspire them to become independent learners.

Stamps Healthcare Ambassador, Georgia Tech, Atlanta, Georgia *August 2024 -* • Aid with campus-wide events in Stamps Health Office. • Participated in flu vaccination clinics and currently part of the nutrition sub-committee

SKILLS & Interests

Programming: Python, Java

Computer-aided design CAD software: Solidworks, Fusion360

Analytical Technology: Excel, MATLAB

Relevant Classes: Linear Algebra, Multivariable Calculus, Survey of Organic Chemistry, Application of Engineering Materials, Statics, Foundation of Health, Conservation Principles in BME

Topics of Interest: Biomechanics, Research & Development, Biomaterials and Regenerative Technologies, Biomedical Robotics

Languages: English (Native), Cantonese (proficient), Mandarin (proficient)