Angela Huang

a265huan@uwaterloo.ca | angela-huang.vercel.app | linkedin.com/in/angela-yi-huang/ | github.com/ayihuang

EDUCATION

Bachelor of Applied Science in Biomedical Engineering - University of Waterloo — Sep 2024 - Present

Academic Representative, Social Representative, Varsity Figure Skater

4.0 GPA - Term Distinction

- BME 101L: SolidWorks, 3D modelling, 2D drawings, 3D assemblies
- BME 161: Engineering design process, development lifecycle, prototyping
- BME 162: Human Factors in Engineering
- BME 121 & 122: C++ programming, data structures and algorithms, and software design

SKILLS

Languages: C++, HTML, CSS, JavaScript, MatLab, C#, Java, SQL, Python
Technologies: SolidWorks, Git, Z-suite, Creality Print, Unity, Photoshop, Microsoft SSMS

EXPERIENCE

Biophotonics Lab Research Assistant — Feb 2024 - Jun 2024

McMaster University Department of Engineering Physics • Hamilton, Ontario

- Developed testing protocols for computer vision systems under Dr. Qiyin Fang to analyze the impact that complex body postures have on the accuracy of AI models for the remote monitoring of physiotherapy exercises
- Conducted literature review on label-free microscopy techniques for heterogenous and dynamic biological systems to communicate findings in lab group presentations to 10+ people
- Created an SQL database to catalogue 50+ lab computers within the McMaster Biophotonics Group, streamlining the identification and allocation of computational resources for specialized research tasks

UX Designer/Marketing Lead — Nov 2024 – Present

BioTEC • Waterloo, Ontario

- Designed uwbiotec.ca, enhancing UX with user-centred design by improving readability, accessibility, and colour contrast for colour-blind users.
- Created social media content with 5000+ viewers promoting BioTEC, Canada's top student-run health tech conference

Skating Coach — Aug 2023 - Present

Hamilton Skating Club • Hamilton, Ontario

- Leveraged leadership skills as a national-level figure skater to coach and mentor 100+ skaters

PROJECTS

Skatelligence: *AI-Powered Figure Skating Analysis* — **skatelligence.ca**

- Co-designed a figure skating training device that uses a neural network to classify figure skating jumps from linear acceleration and angular velocity readings from a 6-axis MPU 6050s
- Engineered and 3D printed ergonomic sensor housings for placement on five key body locations, strategically identified through analysis of figure skating jump mechanics
- Led front-end development of Skatelligence.ca, implementing interactive navigation, custom graphics, and animations

Keyflow Assist: *Cerebral Palsy Piano Physiotherapy System*

- Conducted literature reviews to design a device for CP patients to improve hand function with piano-based physiotherapy
- Engineered a sliding support device which effectively relieves the strain on the shoulder muscles while playing piano in 95%+ of tests and was rated an average of 4/5 for comfort on a Likert scale

Woodpecker Toy: *3D Printed Mechanical Puzzle Toy*

- Developed a 3D-printed woodpecker toy with a design for assembly and manufacturing allowing for easy, puzzle-like assembly and disassembly
- Simulated part assemblies and weight centroids in SolidWorks to ensure mechanical function

AWARDS

- **4x National** Figure Skating Competitor, 11th at the 2023 Novice National Championships
- DELF B1 **French Certificate** (92%)
- **RCM Level 10** Piano Practical and Harmony First Class Honours