YUHAN YANG

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SUMMARY

Motivated and results-driven professional with a Master's in Applied Bioengineering, ready to launch interdisciplinary skills in any challenging roles. Skilled in the development and optimization of medical devices through strong analytical and experimental abilities. Proficient in SolidWorks and CAD-based modeling, with proven expertise in designing precise, functional prototypes. Passionate about research-driven product development that advances human health and well-being.

TECHNICAL SKILLS

SolidWorks	Creo	AutoCAD	ANSYS
LabVIEW	Python	MATLAB	Medical Terminology

INTERNSHIP

Research Assistant, Chinese Academy of Sciences – Suzhou Institute of Biomedical Engineering & Technology   **June 2021 — August 2021**

- Oversaw development of a stroke rehabilitation prototype, advancing design and testing of a sensor-integrated device within a multidisciplinary team.
- Delivered insights through advanced Finite Element Analysis (FEA) using SolidWorks and ANSYS , optimizing structural integrity and movement precision.
- Supported experimental trials integrating ECG to evaluate stress-related tremors on data fidelity.
- Maintained testing infrastructure, drafting detailed technical reports on methodology, findings, and design recommendations.

Research Assistant, Robotics Motion   **February 2021 — March 2021**

- Engineered robust control algorithms for seamless obstacle navigation and road sign interpretation in simulated robotic platforms.
- Assembled CAD-based models, integrating modular components to ensure precision design and structural integrity of mobile robots.
- Conducted performance evaluations and contributed to concept development in competitive entrepreneurial settings.

PROJECT EXPERIENCES

Anesthesia Gas Filter for Surgical Procedures   **September 2023 — June 2024**

- Designed and developed a prototype filter to absorb anesthetic gases (e.g., sevoflurane) used in surgical procedures, addressing both health and environmental concerns
- Modeled the prototype using SolidWorks and fabricated it via 3D printing for experimental validation
- Conducted finite element analysis (FEA) to validate design integrity and applied hydrodynamic optimization to improve gas circulation
- Collaborated on a business plan and presented the project at an entrepreneurship competition

Optimization & Lightweighting of an Ankle Brace   **September 2022 — June 2023**

- Optimized an ankle brace design to balance joint protection and mobility for post-injury recovery
- Utilized topology optimization in nTop software to reduce brace weight while preserving functional joint movement and enhancing protection
- Conducted gait analysis using Kinovea software on walking footage to evaluate brace performance and ensure design met regulatory requirements

EDUCATION

Master in Applied Bioengineering   **September 2023 — December 2024**
University of Washington, Seattle

BSc in Mechanical Engineering   September 2022 — July 2023
Technological University Dublin

BSc in Mechanical Engineering   September 2019 — July 2022
Nanjing Tech University

COURSEWORK

Quantitative Physiology; Engineering Cell Biology; Biomaterials/Nanomaterials in Tissue Engineering; Artificial Intelligence in Bioengineering; Neural Engineering

Dynamic System Modeling; Measurement & Control Interfacing; Fluid System Dynamics; Mechanical Design; Materials Engineering

ADDITIONAL EXPERIENCE

Designing of a Micro-Gripper based on Flexible Mechanism   May 2022 — March 2023

Team Leader, Entrepreneurship Competition for College Students   February 2022 — November 2022

Student Union, Director of Psychology Association   September 2020 — June 2022