Grace (Yingzhe) Qian

yingzhe@umich.edu | +1 (412) 315-5348 | Ann Arbor, MI | www.linkedin.com/in/graceq20

Education

University of Michigan – Ann Arbor, MI May 2024
Master of Science in Biomedical Engineering
Master of Science in Movement Science
Cumulative GPA: 3.97/4.0
Courses: Biomaterials, Cellular Biotechnology, Cancer Biology, Math of Biological Networks, Project Management

Boston University – Boston, MA May 2022
Bachelor of Science in Biomedical Engineering
Cumulative GPA 3.45/4.0; Major GPA: 3.70/4.0; Dean's List
Courses: Solid Biomechanics, Thermodynamics, Transport Phenomenon, Cell Biology, Physiology, Data Science and Stats

Work Experience

Cartilage Healing and Regeneration Lab, University of Michigan – Ann Arbor, MI Sep 2023 – Present
Research Assistant
- Identify cell condensation to regulate hMSC-based cartilage formation using hydrogel and chondrocyte cell culture
- Develop written protocols to study degradation effects of plasmin on PEG hydrogels for enabling cartilage regeneration
- Conduct wet lab experiments, analyze genomics data, initiate literature research and draft research paper

Exercise Oncology Lab, University of Michigan – Ann Arbor, MI Sep 2022 – Jul 2023
Research Assistant
- Conducted 50+ histology experiments to visualize fat distribution in livers of rats and quantified results using ImageJ
- Computed statistical analysis and data visualization with R and Prism, and produced graphics for conferences
- Mentored 7 undergraduate students on wet lab skills; generated 10+ lab protocols with optimized processes
- Compiled literature matrices on links between obesity and breast cancer and proposed findings and data at lab meetings

AstraZeneca Pharmaceuticals – Shanghai, China Jun – Aug 2021
Data Analyst Intern of the iHospital Strategy Program
- Created dashboards and data visualizations to develop sales and marketing strategies based on quarterly sales performance
- Constructed and presented slide decks to regional managers, enhancing performance at annual sales event by 5%
- Authored handbook for data analysis and presentation skills for future interns; facilitated mentorship workshops

Project Experience

Aortic Cannulation Innovation, Sling Health National Network Project Sep 2023 – Present
- Develop prototype of aortic cannulation, to reduce stroke incidents, with SolidWorks and 3D printing
- Conduct competitor research, identify needs and design metrics, develop market plan, and present to Sling panelists
- Initiate stakeholders' interview, present design ideation, collect data from primary research and readjust design

Digital Biopsy for Glomerular Ultrastructural Measurement, Senior Design Sep 2021 – May 2022
- Automated slit diaphragm density measurement in TEM images using Python, decreased measurement time by 80%
- Researched segmentation methods including image processing and machine learning models like U-Net
- Interpreted data using R and Prism; published abstract on 2022 American Association of Nephrology Conference

Temperature-controlled Cell Apparatus Design, Sophomore Project Sep – Dec 2019
- Designed a temperature-controlled cell apparatus that maintained temperature at 37℃ ± 0.3 on microscope platform
- Utilized graphing and machinery tools, including CAD, CNC, and laser cutting machines, to assemble a prototype
- Drafted project statement and estimated project cost; presented and demonstrated prototype with 4 teammates

Leadership Experience

Director of Marketing Committee, Boston University Analytics Club Dec 2020 – May 2022
- Designed graphics for social media to improve membership, increased email subscription by 150+ in a year
- Led workshops on Excel data visualization skills and collaborated with other directors to facilitate other workshops

Member, Hands and Health at Home Program Sep – Dec 2022
- Designed personalized exercise protocols to improve upper limb mobility of older adults in Ann Arbor
- Engaged with clients and maintained strong relationships; improved mobility of clients within 12 weeks

Skills

Computer: MATLAB, Python, R Studio, ImageJ, QuPath, Adiposoft, Prism, C, iMovie, Qualtrics, Microsoft Office Suite
Lab & Machinery: H&E, Immunofluorescence, Western Blot, Protein Assay, microtomy, RNA & protein extractions, CAD
Language: Proficient in Chinese and English