Karen (Kai-Wen) Yang

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EDUCATION

Johns Hopkins University (Baltimore, USA) Expected May 2023
M.S. in Biomedical Engineering (concentration: biomedical data science). GPA: **3.96**.

New York University Abu Dhabi (Abu Dhabi, UAE) May 2020
B.S. in Electrical Engineering. GPA: **3.96**. Awarded **4-year scholarship (274,000 USD)** to study at 3 NYU campuses (Abu Dhabi, New York, Buenos Aires). Graduation honors: ***Summa Cum Laude***, **NYU Honors Scholar**, **Phi Beta Kappa Scholar**. Published **4** academic papers on the topic of machine learning in healthcare and biomedical implants.

WORK EXPERIENCE

Trinity Life Science
Associate Consultant (San Francisco, USA) Expected Aug 2023
Summer Associate Consultant (New York City, USA) Jun 2022-Aug 2022
- Independently managed and completed pricing analysis for 80+ oncology drugs for 5 different countries
- Conducted HTA assessment and clinical trial information search for 40+ drug combinations

Xelay Acumen Healthcare Management Consulting (Taiwan; San Francisco, USA) Sep 2020-Jun 2021
Business Analyst
- Synthesized KOL advisory board meetings and medical literatures into key takeaways and implications for client
- Created compelling storylines and visualizations to accomplish critical communication to medical professionals
- Co-developed client medical publications through clinical data analysis, medical literature information search, and manuscript writing in oncology, nephrology, and pediatric endocrinology
- Tracked and reported project status, concerns, and next steps to senior management and the CEO

RESEARCH EXPERIENCE

Johns Hopkins University, Institute of Computational Medicine (Baltimore, USA) Aug 2021-Present
Lead Project Coordinator, Graduate Research Assistant
- Investigate the usability of existing clinical tools to extract patient phenotypes from clinical notes and rank likely mutated genes for rare genetic diseases
- Assess clinical documentation practices and the usability of electronic health records by physicians and patients

Precision Care Medicine COVID-19 Resistance Project (Baltimore, USA) Aug 2021-Aug 2022
Team Lead
- Acted as the primary liaison between the clinical collaborators at the Johns Hopkins Hospital and the research team
- Led 6 students to work on retrospective biomedical analysis to identify factors that contribute to COVID resistance

LEADERSHIP & VOLUNTEERING EXPERIENCE

Johns Hopkins Graduate Consulting Club (Baltimore, USA)
President of Case Competition and Employer Relations Jul 2022-Present
- Recruited from 40+ candidates and led 5 executive board directors in organizing alumni networking workshops
- Collaborated with Carey Business School and Danaher in planning and carrying out a healthcare case competition

Johns Hopkins Taiwanese Student Association (Baltimore, USA)
President Jun 2022-Present
- Lead the executive board of 8 graduate students to organize 17 events
- Organize and facilitate career workshops and networking events for fellow Taiwanese graduate students

Johns Hopkins Graduate Representative Organization (GRO) (Baltimore, USA)
Social Chair Dec 2022-Present
Secretary Apr 2022-Dec 2022
- Plan and organize 19+ events, each serving 150+ graduate students, at Johns Hopkins in a single semester
- Facilitated the logistics of GRO meetings, the platform that advocates the interests of ~3500 graduate students
- Maintained records of GRO affairs, including minutes of General Council and Executive Board meetings

New York University Abu Dhabi (Abu Dhabi, UAE):
Resident Assistant Aug 2019-May 2020

- Created a living and learning environment that promotes academic growth, personal responsibility, and community accountability through activities such as floor meetings, program initiatives, and intentional one-on-one conversations
- Shared rotational duty coverage with the Residential College staff team and enforced residential college policies
- Provided support in emergencies and times of personal stress as a trained peer leader

Public Health Think Tank (Abu Dhabi, UAE)
Co-Chair Mar 2018-Mar 2020

- Organized a student-led public health conference focusing on cardiovascular diseases/people with disabilities
- Co-managed operations of conference preparation, including logistics, outreach, finance, marketing, design

Summerbridge Hong Kong (Kowloon, Hong Kong)
Student Teacher Jun 2018-Aug 2018

- Designed and taught a science course daily for 5 weeks at a non-profit organization, which aims to improve the educational trajectories of underprivileged students in Hong Kong

Uganda Village Project (Jinja, Uganda)
Monitoring and Evaluation Volunteer Jan 2018

- Conducted data analysis for the Ugandan WASH project and observed patterns in handwashing and other sanitation factors to understand social and behavioral forces affecting the program

HONOR & AWARD

GapSummit Voices of Tomorrow Competition (Cambridge, UK): First Place May 2022-Sep 2022

- Created a business plan with visions to revolutionize vaccine manufacturing and achieve vaccine equity
- Selected as Finalist to pitch the business plan at the University of Cambridge

Siemens Healthineers Innovation Think Tank (Dubai, UAE): First Prize Nov 2019

- Designed an integrated system with 3 team members to address 3 main challenges surrounding cardiovascular diseases: timely detection, lack of awareness, and lack of motivation
- Presented problems identified and corresponding solutions to Siemens management, hospital CEOs, and healthcare stakeholders in the UAE

iGEM Synthetic Biology Competition (Boston, USA): Gold Medal Prize Apr 2018-Nov 2018

- Developed a portable point-of-care medical diagnostic device for rapid detection of food pathogens with a diverse group (13 students from 13 countries)
- Led design and development of the heating device for the DNA amplification reaction
- Presented at the iGEM Giant Jamboree in Boston alongside more than 300 teams from over 40 countries

PUBLICATIONS

- **Yang KW**, Paris C, Gorman K, …, Ray SC. Factors associated with resistance to SARS-CoV-2 infection discovered using large-scale medical record data and machine learning. PloS one. 2023. (link)
- Mesinovic M, **Yang KW**. Multi-label Neural Model for Prediction of Myocardial Infarction Complications with Resampling and Explainability. In 2022 IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI) 2022 Sep 27 (pp. 01-05). IEEE. (link)
- Ghosheh GO, Alamad B, **Yang KW**, …, Shamout FE. Clinical prediction system of complications among patients with COVID-19: A development and validation retrospective multicentre study during first wave of the pandemic. Intell Based Med. 2022. (link)
- **Yang KW**, Oh K, Ha S. Challenges in Scaling Down of Free-Floating Implantable Neural Interfaces to Millimeter Scale. IEEE Access. 2020. (link)
- Ibrahim L, Mesinovic M, **Yang KW**, Eid MA. Explainable Prediction of Acute Myocardial Infarction Using Machine Learning and Shapley Values. IEEE Access. 2020. (link)
- Akram MA, **Yang KW**, Ha S. Duty-Cycled Wireless Power Transmission for Millimeter-Sized Biomedical Implants. Electronics. 2020. (link)