YUEXING HAO

CV Updated on 8/15/2023

Education

Ph.D. Human Centered Design, Cornell University 09/2022 to 05/2026
Concentrations in Human-Computer Interaction and Health Intelligence

M.S. Computer Science, Tufts University 09/2020 to 01/2022

B.A. Computer Science, Rutgers University-New Brunswick 09/2017 to 05/2020

Selected Awards and Fundings **(Specific)**

★ **Competitions**

Cornell University Graduate School 2023 Three Minute Thesis competition (3MT) Finalist;
The 2020 Interdisciplinary Contest in Modeling (ICM) Meritorious Winner

★ **Travel Awards**

$9,800 (XR Access Symposium Scholarship; Nana Kirk Travel Scholarship; Cornell Institute for Healthy Futures (CIHF) Research Grant; ACM SIGCHI Gary Marsden Travel Award; Microsoft sponsored Knowledge Discovery and Data Mining (KDD); Career Beyond Academia; Cornell Graduate School; New York Home Care Association (HCA) Sepsis Summit; Tufts University Graduate Student Travel Fund, etc.)

★ **Research Funds/Fellowship**

$11,689 (2023 WHO/Cochrane/Cornell University Summer Institute Fellowship; Life Sciences Technology Innovation Fellowship (LSTIF); Prototyping Hardware Accelerator at Rev Ithaca Startup †; Women Entrepreneurs (W.E.) Cornell Summer Fund; Digital Agriculture Hackathon "The Best Use of Data" †; Tufts University Fall 2020 Graduate Student Research Competition Award; AAAI 2020 Undergraduate Scholar; Rutgers Aresty Research Center Undergraduate Research fellowship)

★ **Service Funds**

$5,555 (Cornell University Graduate and Professional Student Assembly Finance Commission Funding Spring 23' †, Summer 23' †, Fall 23'†; Cornell University Human Centered Department †)

Publications

1. **Y. Hao**. Technology Integration in Addressing Patients' Psychological Needs for Healthcare Space: A Literature Review. *Submission to Computers in Human Behavior Reports Journal.*
2. **Y. Hao**, Z. Liu, M. Safford, R. Tamimi, R. Riter, S. Kalantari. Patient Centered Clinical Shared Decision-Making for Optimized Health Outcomes: An Exploratory Study with Older Cancer Patients. *Submission to 2024 CHI Conference on Human Factors in Computing Systems (CHI '24).*
3. **Y. Hao**, Z. Liu, M. Safford, R. Tamimi, S. Kalantari. An Exploratory Study of Shared

†Group/team work
*Equal authorship

Decision-Making (SDM) for Older Adult Patients with Chronic Diseases. *Accepted to ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW '23) Poster Paper Track.*

4. Y. Qian, **Y. Hao***, K. Quan*, S. Yang*, Y. Zhao*, V. Kuleshov, F. Wang. Harnessing Biomedical Literature to Calibrate Clinicians' Trust in AI Decision Support Systems. *In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 14, 1–14. https://doi.org/10.1145/3544548.3581393*

5. Y. Fei, F. Chen, L. He, J. Chen, **Y. Hao**, X. Li, G. Liu, Q. Chen, L. Li, H. Wei. Intelligent classification of antenatal cardiotocography signals via multimodal bidirectional gated recurrent units. *Biomedical Signal Processing and Control, Volume 78, 2022, ISSN 1746-8094, https://doi.org/10.1016/j.bspc.2022.104008.*

6. **Y. Hao**, V. Bellotti. OOTOMS: Outcome-Oriented Techniques for User's Optimized Model Selections using Visualization Tools. *Workshop of Human-Centered Design of Symbiotic Hybrid Intelligence 2022.*

7. **Y. Hao**, M. Vaysiberg. Dynamic Strategies and Opponent Hands Estimation for Reinforcement Learning in Gin Rummy Game. *Intelligent Systems and Applications. IntelliSys 2021. Lecture Notes in Networks and Systems, vol 294. Springer, Cham.*

8. **Y. Hao**, G. Shafer. Models for Predicting Global Plastic Waste. *Rutgers University Research Journal (RURJ), Spring 2021.*

9. R. Cai, Z. Liang, B. Xu, Z. Li, **Y. Hao**, Y. Chen. TAG: Type Auxiliary Guiding for Comment Generation. *58th Association for Computational Linguistics (ACL), 2020.*

10. R. Cai, W. Di, X. Chen, **Y. Hao**. Dual-Dropout Graph Convolutional Network for Predicting Synthetic Lethality in Human Cancers. *Bioinformatics, btaa211,2020. https://digital-library.theiet.org/content/journals/10.1049/iet-ipr.2019.0716*

11. M. Wang, Y. Liang, L. Chen, **Y. Hao**, H. He, C. Li. Single Image Rain Removal with Reusing Original Input Squeeze-and-Excitation Network. *IET Image Processing, 2020.*

Projects

Future Clinics in Metaverse 02/2022 to Current

Cornell Institute for Healthy Futures (CIHF) – Ithaca, NY

❖ Proposed a future healthcare environment in a virtual reality platform.

❖ Employed Meta Quest 2 Oculus Headset to design a patient-centered immersive virtual environment to decentralize clinics and centralize on patients and physicians.

Agriverse - An Intelligent Agriculture Health Tech Management Platform 04/2022 to Current

Cornell Institute for Digital Agriculture (CIDA) – Ithaca, NY

❖ Proposed an intelligent platform for commercial farm owners to smartly monitor the real-time barn sprinkler system to reduce water usage and improve barn management efficiency, employing computer vision techniques.

AI-Infused Literature-Based Clinical Decision Support System (CDSS) 03/2022 to Current

Cornell Designing AI Lab – Ithaca, NY

❖ Amidst the various attempts of explaining the inner-working of DST predictions, we investigated an alternative approach to explainable artificial intelligence (XAI) in the case of clinical DSTs – leveraging trusted sources of evidence to explain DST predictions.

❖ Built the CDSS interface and conducted clinician interviews for underpinning how clinicians leverage literature in clinical decision-making at point-of-care.

VitalMask Software 03/2022 to Current

Vita Innovations.Inc – Ithaca, NY

❖ Built a streamlined software platform for nurses to view all patient data at a glance while actively tracking changes in patients' urgency of need through a priority scoring system.

❖ Provided continuous vital monitoring which will be used to re-prioritize patients as they wait in hospital waiting rooms, ultimately addressing the consequences of ED overcrowding.

Pallia Care System 01/2021 to Current

Tufts University – Boston, MA

❖ Built outcome-first and stage-first frameworks for users by reversing the traditional visual information mantra "Overview first, Details on demand."

❖ Guided HCI design process of requirements analysis followed by iterative design and evaluation of prototypes.

❖ Visualized healthcare and medical data and Classifying patients' information and designed a new data system that helps users to find the best healthcare treatment option based on users' personal needs.

Story Illustration - From Texts to Images 08/2019 to 05/2020

Rutgers Intelligent Visual Interfaces Lab (IVI lab) – New Brunswick, NJ

❖ Assisted in research support of data processing operations for large survey research projects.

❖ Displayed visual story illustrations from the consequences of texts, by using machine learning languages in Python like PyTorch

Working History

Ph.D. Research Fellow 03/2022 to Current

Cornell University – Ithaca, NY

Software Research Lead 03/2022 to Current

Vita Innovations – Ithaca, NY

Data Scientist Intern 09/2021 to 01/2022

Keva Health – Lexington, MA

Graduate Teaching Assistant 09/2020 to 12/2021
Tufts Computer Science Department – Medford, MA

Journal of Big Data: Theory and Practice (JBDTP) Assistant Editor 05/2020 to 09/2020
New Jersey Big Data Alliance (NJBDA) - Remote

Selected Press

★ **2023**
- ★ **Y. Hao**, Z. Liu, S. Tang, H. Zhao, G. Guo. Pending US patent through Cornell Center for Technology Licensing (CTL) - HUG Intelligent Medication Management System (docket number 10677).
- ★ Patricia Waldron, AI tool gains doctors' trust by giving advice like a colleague, *Cornell Chronicle*
- ★ Cornell Graduate School, Eight Students Advancing to 3MT Finals, *Cornell Announcement*

★ **2022**
- ★ Haining Zheng, The 5th International Workshop on Artificial Intelligence of Things (AIoT) at KDD 2022, *LinkedIn Newsletter*
- ★ Laura Gallup, Teams take a crack at world food issues at digital ag hackathon, *Cornell Chronicle*

★ **2021**
- ★ Weatherhead Center, Disrupted Lives: Linking, De-linking and the Infrastructures of Recovery, *Harvard University*
- ★ Senior Exhibit, Story Illustration – From Texts to Images, *Rutgers Aresty Research Center*
- ★ Department News, Rutgers undergraduate receives "Meritorious Performance" award in Modeling contest, *Rutgers University School of Arts and Sciences*

Invited Presentations

1. Poster Presentation for New York Academy of Sciences: The New Wave of AI in Healthcare. *AI-Enhanced Patient-Centered Clinical Shared Decision-Making (SDM): A "Black Box" Study with Older Adults*. (May 2023)
2. Women in Data Science (WiDS)-Stanford University Workshop. (Apr 2023)
3. Seminar Presentation for Cornell College of Human Ecology. (Apr 2023)
4. Guest Presentation for Weill Cornell Payne Whitney Women's Program. *Health Intelligence for Future.* (Feb 2023)
5. Guest Lecture for Columbia Nursing Visualization Design Studio. *Health Intelligence for Future - Building AI-Infused Clinical Decision Support Systems.* (Dec, 2022)
6. Short Talk on KDD AIoT Workshop. *Agriverse: Agriculture Metaverse* (Aug, 2022)
7. Guest Presentation on ICML AI&Woman Event. *HamletEye: An AI-Powered Patient-Oriented Clinical Decision Framework Using Visualization Tools* (Jun, 2022)
8. Poster Presentation for the 5th Annual Primary Care & Hospital Medicine Innovations Symposium at Cornell University. (Feb, 2022)

9. Poster Presentation for the second annual Graduate Research Science and Technology Studies (Grists) at Harvard University. (Oct, 2021)
10. Poster Presentation for Women in Data Science-Cambridge Initiative (Mar, 2021)

Reviews

- ★ IEEE VIS 2023 Alt.Vis Workshop Reviewer
- ★ 27th ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW) 2024 Paper Associate Chair
- ★ 26th ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW) 2023 Paper Reviewer, Posters Associate Chair
- ★ AMIA 2023 Annual Symposium Abstract Reviewer

Professional Services

- ❖ 2023
  - ➢ IEEE Graduate Student Member (ID: 99480042)
  - ➢ The American Psychological Association (APA) Graduate Member
  - ➢ Colman Inclusive Leadership Program
  - ➢ Cornell University Human-Centered Design Graduate Student Association (HCD GSA) 2023-2024 President
  - ➢ ACM Special Interest Group on Computer-Human Interaction (SIGCHI) Student Member
  - ➢ Cornell Center for Health Equity (CCHEq) Member
- ❖ 2022
  - ➢ Volunteer of Cayuga Medical Center Outpatient Care Coordination (Fall 2022)
  - ➢ Organizer of 2022 Cornell + Miller Knoll Innovation Challenge for *Future Healthcare Solutions*. (Nov, 2022) Handbook

Mentorship

1. Peer Mentor for Cornell MAC (Multicultural Academic Council) Mentoring Program
2. Grace Hopper Celebration (GHC) Open Source Day Mentors
3. Kexin Quan (UCSD Electrical & Computer Engineering M.S., now IS PhD at UIUC, Summer 22')
4. Zeyu Liu (Cornell Human-Centered Design M.S., Fall 22', Spring 23')
5. Sabrina Tang (Cornell Human Development B.S., Fall 22')

Teaching Experience

Cornell University Teaching Assistant

Policy Meets Design: High-Impact Facilities of the 21st Century	Fall 2022
Planning and Managing the Workplace: Evidence-Based Design	Fall 2022
Healthcare Innovations	Spring 2022

Tufts University Teaching Assistant

Introduction to Machine Learning and Data Mining	Spring, Fall 2021
Deep Neural Network	Fall 2020

Rutgers University Teaching Assistant

Data 101	Spring 2020
Introduction to Computer and Application	Fall 2019