Jiakun Yu

yu.jiakun@outlook.com
(+1) 765-435-0999

Website
LinkedIn
Google Scholar

I obtained my **PhD** in 2024 from the University of Sydney, where I specialized in Human-Computer Interaction and Soft Devices under the supervision of **Dr. Anusha Withana** and **Prof. Judy Kay**. I have published in two top-tier journals within these disciplines and led five interdisciplinary projects. I look forward to collaborating with a team in the fields of digital fabrication and wearable sensors to create impactful technologies.

Current Position

2025.03 — Present **Purdue University** **Postdoctoral Research Associate**
Funding: The Institute for Physical Artificial Intelligence (IPAI) Postdoctoral Fellowship

Education

2020.07 — 2024.09 **The University of Sydney** **Human-Computer Interaction (PhD)**
Supervisor: Dr. Anusha Withana
Thesis: Computational Design and Fabrication of Customizable Interactive Soft Devices
Projects: I led three novel projects during my PhD, focusing on smart textiles, customizable pressure sensors, and epidermal sensors. Additionally, as a core team member, I contributed to the development of devices that assist visually impaired people in perceiving graphics.

2019.01 — 2019.12 **The University of Sydney** **Data Science (Master)**
Supervisor: Dr. Anusha Withana
Major: Machine learning, statistical principles, cloud computing, data mining, data visualization, etc.
Project: Design and manufacture a flexible bending sensor that can detect and record the degree of bending of the user's body joints, and provide real-time feedback and suggestions to the user based on the collected data.

2014.01 — 2018.12 **Monash University** **Electrical and Computer System (Honors)**
Supervisor: A/Prof. Yi Hong
Major: Theoretical and practical learning in multiple areas such as computer systems, electronics, electrical engineering, robotics, and telecommunications.
Project: Simulations reproduced the application of polar code encoders and decoders in 5G wireless communications, mathematically verifying the advantages of polar code.

Publications

[*] These authors contributed equally.

[6] Dizhi Ma[*], **Jiakun Yu**[*], Xinyi Wang, Xiyun Hu, Liang He, Sooyeon Jeong, Karthik Ramani. AgentCoach: LLM-Based Adaptive Coaching Feedback for Motor Skill Learning. *Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (**CHI 2026**).*

[5] Hsuanling Lee, **Jiakun Yu**, Shurui Zheng, Te-Yan Wu, Liang He. FluxLab: Creating 3D Printable Shape-Changing Devices with Integrated Deformation Sensing. *Proceedings of the Twentieth International Conference on Tangible, Embedded, and Embodied Interaction (**TEI 2026**).*

[4] **Jiakun Yu**, Hasindu Kariyawasam, Shuying Wu, Sriram Subramanian, and Anusha Withana. Designing Multi-DoF Epidermal Bend Sensors Using Flexible Resistive Traces. *IEEE Sensors Journal.*

[3] **Jiakun Yu**, Supun Kuruppu, Biyon Fernando, Praneeth Perera, Yuta Sugiura, Sriram Subramanian, and Anusha Withana. IrOnTex: Using Ironable 3D Printed Objects to Fabricate and Prototype Customizable Interactive Textiles. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) (**UbiComp 2024**).*

[2] **Jiakun Yu**, Praneeth Perera, Rahal Viddusha Perera, Mohammad Mirkhalaf, and Anusha Withana. Fabricating Customizable 3-D Printed Pressure Sensors by Tuning Infill Characteristics. *IEEE Sensors Journal.*

[1] Edwin Chau, **Jiakun Yu**, Cagatay Goncu, and Anusha Withana. Composite Line Designs and Accuracy Measurements for Tactile Line Tracing on Touch Surfaces. *Proceedings of the ACM on Human-Computer Interaction (PACMHCI) (**ISS 2021**).*

Professional Experience and Internships

2021.06 — 2023.06 The University of Sydney, University of New South Wales Teaching Assistant
Served as a Teaching Assistant for DATA2001/2901 (Data Science, Big Data and Data Variety), COMP5047 (Pervasive Computing), and ZEIT8018 (Cyber Resilience: Management Governance and Acquisition). Responsibilities included assisting with teaching, grading exams, facilitating class discussions, and leading lab sessions.

2019.05 — 2019.07 Hunan Xiaoben Sports Technology Co., Ltd Algorithm Engineer
Visual Optimization: Developed the body movement recognition feature for the "Xiaoben Sports" app, using computer vision to automatically capture and count jumping jacks via smartphone cameras. Optimized the CVzone package to ensure precise marking of human keypoints for accurate motion detection.
Outcome: Enabled the smartphone camera to easily record users' activity counts, enhancing the exercise experience and effectively motivating users.

2018.12 — 2019.02 Changan Automobile Co., Ltd. Automotive Engineering Intern
Sensor Calibration: Calibrated and optimized the LiDAR sensors' API for Changan's autonomous vehicles, using C++, Python, and other tools to ensure data accuracy and timeliness.
Environmental Reconstruction: Implemented SLAM for autonomous driving on the ROS platform using Google Cartographer, optimizing map generation algorithms and sensor integration strategies to improve system localization accuracy and map update rates.

Grants and Honors

2025	The Institute for Physical Artificial Intelligence (IPAI) Postdoctoral Fellowship
2020–2023	Engineering Research Scholarship (ERS), The University of Sydney
2019	Summer Research Project Scholarship, The University of Sydney

Invited Talks

2025.11	Purdue University – Soft Wearable Interfaces as Multimodal Platforms for AI-Enhanced Sports Skill Learning
2024.10	UbiComp/ISWC 2024 – IrOnTex: Using Ironable 3D Printed Objects to Fabricate and Prototype Customizable Interactive Textiles
2024.04	Keio University – Computational Design and Fabrication of Customizable Interactive Soft Devices
2021.10	ISS 2021 – Composite Line Designs and Accuracy Measurements for Tactile Line Tracing on Touch Surfaces

Services

Associate Chair **ACM CHI Posters** 2026

**** Special Recognitions for Outstanding Reviews for CHI 2026***

Reviewer **ACM CHI** 2026
ACM Transactions on Computing for Healthcare (2025)
ACM CHI LBW 2024
IEEE Sensors Journal 2024,2025
ACM MobileHCI LBW 2023
ACM Interactive Surfaces and Spaces (ISS) 2022

Volunteering **ACM TEI** 2020