

Bryan Wang

DEPARTMENT OF COMPUTER SCIENCE
UNIVERSITY OF TORONTO
40 St George St, Toronto, ON, Canada

Website: <http://www.dgp.toronto.edu/bryanw/>

Email: bryanw@dgp.toronto.edu

Phone: +1 341-400-7031

Research Interests

Human-computer interaction; AI-infused interactive systems; creativity support tools.

Education

- 2020- **University of Toronto**, Department of Computer Science.
Ph.D. in Computer Science.
Advisor: Prof. Tovi Grossman.
- 2018-2020 **University of Toronto**, Department of Computer Science.
MSc in Computer Science.
Advisor: Prof. Tovi Grossman.
- 2013-2018 **National Taiwan University**, Department of Computer Science.
BSc in Computer Science and Information Engineering.
Advisor: Prof. Mike Y. Chen.

Professional Experiences

- Summer 2021 **Adobe Research**, Research Intern. Remote/San Francisco, CA.
Mentors: Dr. Gautham J. Mysore and Dr. Zeyu Jin.
Working on screen-free audio content creation project.
- 2020-2021 **Google Research**, Student Researcher. Remote/Mountain View, CA.
Mentor: Dr. Yang Li.
Continued collaboration with Google Research.
- Summer 2020 **Google Research**, Research Intern. Remote/Mountain View, CA.
Mentor: Dr. Yang Li.
Worked on automatic mobile UI language summarization using multimodal learning. [C. 7]
- Summer 2018 **Academia Sinica**, Research Assistant. Taipei, Taiwan.
Mentor: Dr. Yi-Hsuan Yang.

Worked on deep-learning-based score-to-audio music generation [C. 4].

Summer 2016 **IBM**, Application Developer Intern. Taipei, Taiwan.
Developed full-stack chatbot for hotel guest service using IBM Watson API.

Publications

CONFERENCE PAPERS

- 2021 [C.7] **Bryan Wang**, Gang Li, Xin Zhou, Zhouong Chen, Tovi Grossman, Yang Li. Screen2Words: Automatic Mobile UI Summarization with Multimodal Learning. Conditionally accepted to *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST '21)*.
- 2021 [C.6] **Bryan Wang**, Mengyu Yang, Tovi Grossman. Soloist: Generating Mixed-Initiative Tutorials from Existing Music Instructional Videos Through Audio Processing. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '21)*
- 2020 [C.5] **Bryan Wang**, Tovi Grossman. BlyncSync: Enabling Multimodal Smartwatch Gestures with Synchronous Touch and Blink. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '20)*
- 2019 [C.4] **Bryan Wang**, Yi-Hsuan Yang. PerformanceNet: Score-to-Audio Music Generation with Multi-Band Convolutional Residual Network. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI '19)*. Oral Presentation (acceptance rate: 6.4%).
- 2018 [C.3] Yu-Chian Wu, Te-Yen Wu, Paul Taele, **Bryan Wang**, Jun-You Liu, Po-En Lai, Pin-Sung Ku, Mike Y. Chen. ActiveErgo: Automatic and Personalized Ergonomics using Self-actuating Furniture. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI '18)*.
- 2017 [C.2] Te-Yen Wu, **Bryan Wang**, Jiun-Yu Lee, Hao-Ping Shen, Yu-Chian Wu, Yu-An Chen, Pin-sung Ku, Ming-Wei Hsu, Yu-Chih Lin, Mike Y. Chen. CircuitSense: Automatic Sensing of Physical Circuits and Generation of Virtual Circuits to Support Software Tools. In *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST '17)*.
- 2016 [C.1] Chiuan Wang, Hsuan-Ming Yeh, **Bryan Wang**, Te-Yen Wu, Hsin-Ruey Tsai, Rong-Hao Liang, Yi-Ping Hung, Mike Y. Chen. CircuitStack: Supporting Rapid Prototyping and Evolution of Electronic Circuits. In *Proceedings of the ACM Symposium on User Interface Software and Technology (UIST '16)*.

DEMO PAPER

- 2019 [D.1] Yu-Hua Chen, **Bryan Wang**, Yi-Hsuan Yang. Demonstration of PerformanceNet: A Convolutional Neural Network Model for Score-to-Audio Music Generation. In *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence (IJCAI '19)*.

Honours & Awards

- 2018 **Faculty of Arts and Science Fellowship**, University of Toronto.
- 2016 **Best Talk Award**, ACM UIST 2016 (2 of 77).
- 2016 **The James Dyson Award World Finalist**, James Dyson Foundation.
- 2016, 2017 **Undergraduate Research Award**, National Taiwan University.
- 2017 **AI and CS Research Excellence Scholarship**, Appier Inc.

Invited Presentations

- 2020 **ACM SIGCHI, Toronto Chapter**. Toronto, ON.
BlyncSync: Enabling Multimodal Smartwatch Gestures with Synchronous Touch and Blink.
- 2017 **ACM SIGGRAPH, UIST Reprise**. Los Angeles, CA.
CircuitStack: Supporting Rapid Prototyping and Evolution of Electronic Circuits.
- 2017 **Appier Inc.** Taipei, Taiwan.
CircuitStack: Supporting Rapid Prototyping and Evolution of Electronic Circuits.

Teaching Experiences

- 2019-2020 **Human-Computer Interaction**, CSC 428-2514.
Graduate CS course, University of Toronto.
Teaching Assistant. Led weekly tutorial, marked assignments, and organized final presentation.
- Winter 2019 **Intro to Computer Science**, CSC 148.
Undergraduate CS course, University of Toronto.
Teaching Assistant. Led weekly tutorial, marked midterm and final exam.
- Fall 2018 **Intro to Computer Programming**, CSC 108.
Undergraduate CS course, University of Toronto.
Teaching Assistant. Held office hour, marked midterm and final exam.

Academic Services

ORGANIZING

- 2021 **Program Committee, Associate Chair**. ACM CHI Late-Breaking Work.
- 2019 **Student Volunteer**. ACM CHI 2019.

REVIEWING

- 2020-2021 **Reviewer**. The ACM Conference on Human Factors in Computing Systems (CHI)
- 2020-2021 **Reviewer**. The ACM Symposium on User Interface Software and Technology (UIST)
- 2021 **Reviewer**. The ACM Designing Interactive Systems conference (DIS)
- 2021 **Reviewer**. The ACM conference on Creativity & Cognition (C&C)
- 2021 **Reviewer**. IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)

2021 **Reviewer.** Transactions of the International Society for Music Information Retrieval (TISMIR)

Mentoring

2020-2021 Qian (Philip) Chen, Undergraduate student in Engineering Science, University of Toronto.
Topic: AI-assisted Sketching Tutoring System.

2021 Zhouyue Lyu, Undergraduate student in Computer Science, University of Toronto.
Topic: Interactive Visualization and Sonification of Neural Networks.

2020 Mengyu Yang, Undergraduate student in Engineering Science, University of Toronto.
Topic: AI-assisted Musical Instrument Learning System [C. 6].

Skills

Programming: Python, C/C++, Java, JavaScript, C#, HTML5, CSS.

Tools: Tensorflow, Keras, Pytorch, Android, flask.