

Yun-Ning Hung (洪韻甯)

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I am currently a research assistance at Academia Sinica, Taipei, Taiwan. My research interests include machine learning and music information retrieval. Besides, I am also an application and web developer, and an amateur instrument player.

Education

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| 2012 Aug. - 2016 Jun | B. S. in Electrical Engineering (GPA 3.764/4.0)
National Cheng Kung University, Taiwan |
| 2014 Aug. - 2014 Dec | UW Madison Exchange Program (GPA 3.67/4.0)
University of Wisconsin Madison, US |

Work Experience

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| 2017 Sep. - present | Research Assistant at Academia Sinica. Working on machine learning algorithm and Music Information Retrieval |
| 2016 Apr. - 2017 Jun | App and Web developer at Adv.Media. I am responsible for creating interactive multimedia platform with AR/VR techniques. I am also responsible for back-end system design and dataset management |
| 2014 Aug. - 2015 Aug. | Front-end developer in Jimbo's Coffeeine, a student startup company working on creating algorithm and web platform to facilitate education |
| 2014 Jan. - 2016 Aug. | Personal tutor teaching junior/senior high school math and science;
Tzu Chi Senior High School guitar club mentor |
| 2014 Jul. - 2014 Aug. | Activities PR Personnel in social welfare organization for immigrants and foreigners. Responsible for website management and organizing activities |

Project

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| 2017 Sep. - present | Music Auto-tagging , advised by Dr. Yi-Hsuan Yang, director of Music and AI Lab at Academia Sinica, and cooperated with KKBOX Inc. machine learning research team <ul style="list-style-type: none">● Instrument recognition – using deep learning algorithm to handle music harmonic structure; implemented it to do frame-level instrument recognition [3]● Music genre tagging – using deep learning algorithm for music genre and subgenre tagging● Music emotion tagging – cross domain (audio and symbolic) emotion tagging and symbolic drum generation via emotion tags |
| 2018 May. - present | Multi-pitch Streaming – a multitask network structure trained with large-scale synthesized dataset for music auto-transcription. [2] |
| 2018 May. - present | Music Disentanglement – a deep learning structure for pitch and timbre representation learning; apply the learned features to AI composing and music editing [1] |
| 2016 Sep. - 2017 Jun | Turpan tourist application – an interactive application to help tourists explore the ancient city through the cutting-edge AR/VR techniques |

2016 Feb. - 2016 Jun	Sound of Summer – a project using conductive silver ink painting to realize interactive sound effect; presented at NCKU Art Festival
2015 Sep. - 2015 Dec	BadgerScale – student project done in course “Software Engineering” given by Prof. Peter Ohmann at UW Madison. Developed App platform for students to sale or buy sport tickets
2014 Aug. - 2015 Aug	Exam Analysis System – cooperated with high school to develop algorithm and web platform for teacher to better understand students’ performance and exam efficiency
2014 Feb. - 2014 Jun.	Homework Discussion Social Media , student project done in course “Web Programming” given by Prof. Chang Tien-Hao at NCKU. Developed social platform for students to exchange their notes, homework or publications

Publication

- [1] Yun-Ning Hung, Yi-An Chen and Yi-Hsuan Yang, “Learning Disentangled Representations for Timber and Pitch in Music Audio”, arXiv preprint arXiv:1811.03271
- [2] Yun-Ning Hung, Yi-An Chen and Yi-Hsuan Yang, “Multitask learning for frame-level instrument recognition”, arXiv preprint arXiv:1710.10814
- [3] Yun-Ning Hung and Yi-Hsuan Yang, “Frame-level Instrument Recognition by Timbre and Pitch”, in Proceeding of the 19th International Society for Music Information Retrieval Conference (ISMIR), Sep. 2018
- [4] Lang-Chi Yu, Yi-Hsuan Yang, Yun-Ning Hung, Yi-An Chen, “Hit Song Prediction for Pop Music by Siamese CNN with Ranking Loss” in arXiv preprint arXiv:1710.10814, Oct. 2017

Academic Award

2018	WIMIR Travel Grant for ISMIR 2018
2015 Fall	Scholarships for Excellent Students to Study Abroad
2015 Spring	Honorable Mention in Campus App Creativity Competition
2013 Aug. - 2014 Jun.	Academic Excellence Award (For the top 10% students in the class)
2012 Sep. - 2016 Jun	Taipei Association of Medical Technologists Award

Skill

Language	Mandarin(mother tongue), English(Fluent), Spanish (Familiar)
Technical Skills	Programming: Python, C#, PyTorch, Git Web: HTML, CSS, Javascript, PHP-SQL Instrument: Piano, Flute, Guitar, Harmonica

Other Experience

2015 Jun - 2016 Jun	Student ambassador and Chinese tutor for Foreign students in NCKU
2015 Sep - 2015 Nov	Worship performer at Pres House, Madison, WI
2014 Spring	Resident performer in Imagine Cafe, Tainan, Taiwan
2014 Spring	Win the second place in the 17 th South Acoustic Song Competition
2014 Spring	Win the third place in the 34 th NCKU Folk Song Competition
2014 Winter	Win the sixth place in the song writing competition, 15 th South Guitar Cup
2014 Aug. - 2015 Jan	Vice president of NCKU Guitar Club
2013 Jan. - 2014 Jan.	Volunteer in Caring Club and Elder Protection Center

(please visit my website for more details: <https://biboamy.github.io/amyhung/>)