

Yu-Ching Lin (Aaron Lin)

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[personal website during master degree](#)

Skill Inventory

- 2 years experience on C development
- 2 years experience on Python development
- 4 years experience on Matlab development
- 1 year experience on Hadoop development
- 4 years experience on research topics including:
 - audio/video signal processing
 - music classification
 - music information retrieval
- Familiar with developing on Linux and Mac

Experiences

- ***Research Leader of Research Center in KKBOX Inc.***
 - 2012--Now
 - *Research Leader* of Research Center
 - Recruiting, training, and managing three members
 - Planing research and product directions
 - Planing and executing cooperations with schools and research institutes
 - Cooperating with other divisions and requesting for resources
 - *Lead developer* of Mood functionality of Mymix Radio (shipped in newest KKBOX software and in Utopass, a KDDI branded mobile radio service)
 - Helped to organize genre/year meta to provide a radio service based on genre/year/mood
 - Designed and performed classification of million of songs
 - Evaluated and tuned the system

- Provided such functionality across all the served countries, ex: Taiwan, Thailand, Malaysia, etc.
- *Lead developer* of Tap Game (shipped in newest KKBOX mobile apps)
 - Developed automatic tap game generation method
 - Computed tap game of millions of songs
 - Evaluated and tuned the automatic generated tap game
- ***Protocol Engineer of Mediatek***
 - 2010--2012
 - Studied 2G protocol spec
 - Maintained and developed modules in 2G MAC layer
 - Handled and responded to developer/customer issues
- ***Administrative Assistant of Little Giant Chinese Chamber Orchestra***
 - 2005--2007
 - Held several concerts and cooperated with professional musicians
 - Packed and transported musical instruments
 - Changed the stage settings during the interval
- ***Orchestra Leader of National Taiwan University Chinese Orchestra***
 - 2005--2006
 - Administrated the orchestra
 - Planed and ran a tour with three concerts in Taiwan

Education

- ***Masters of Communication Engineering in National Taiwan University***
 - 2007--2009
 - Studied various fields in music information retrieval, computer vision, text analysis
 - Master thesis: *Exploiting Online Tags for Music Emotion Classification*
 - Collected and cleaned data for composing a dataset with about 7,000 songs from Youtube
 - Developed a tag utilization framework of emotion
 - Utilized methods to encounter data-imbalance problem easily found in online

data

- **Bachelor of Science of Electrical Engineering in National Taiwan University**
 - 2003--2007
 - Overall grade average: 83.27, overall GPA: 3.62 / 4.00
 - Attended courses of sociology and psychology

Honor

- **3rd price of Nissan Design Award**
 - Presented the emotion recognition framework applied on vehicle

Publications

- **Journal papers**

- **Y.-C. Lin**, Y.-H. Yang and H.-H. Chen, "Exploiting online tags for music emotion classification," *Special Issue on Social Media, ACM Transactions on Multimedia Computing, Communications, and Applications (TOMCCAP)*, vol. 7S, no. 1, Oct. 2011.
- Y.-H. Yang, **Y.-C. Lin**, Y.-F. Su, and H.-H. Chen, "A regression approach to music emotion recognition," *IEEE Transactions on Audio, Speech and Language Processing (TASLP)*, vol. 16, no. 2, pp. 448-457, Feb. 2008. (**IEEE Signal Processing Society Young Author Best Paper Award**)

- **Conference papers**

- C.-Y. Sha, Y.-H. Yang, **Y.-C. Lin**, and H. H. Chen, "Singing voice timbre classification of Chinese popular music," *Proc. IEEE Int. Conf. Acoustics, Speech, and Signal Processing 2013 (ICASSP'13)*.
- Y.-H. Yang, **Y.-C. Lin**, A. Lee, and H.-H. Chen, "Improving musical concept detection by ordinal regression and context fusion," *Proc. Int. Society of Music Information Retrieval 2009 (ISMIR'09)*, pp. 147-152.
- M.-Y. Su, Y.-H. Yang, **Y.-C. Lin**, and H.-H. Chen, "An integrated approach to music boundary detection," *Proc. Int. Society of Music Information Retrieval 2009 (ISMIR'09)*, pp. 705-710.
- Y.-H. Yang, **Y.-C. Lin**, and H.-H. Chen, "Personalized music emotion recognition," *Proc. ACM Int. Conf. Information Retrieval 2009 (SIGIR'09)*, Boston, USA, short

paper, pp. 748-749.

- **Y.-C. Lin**, Y.-H. Yang, H.-H. Chen, I-Bin Liao, and Yeh-Chin Ho "Exploiting genre for music emotion classification," *Proc. IEEE Int. Conf. Multimedia and Expo. 2009 (ICME'09)*, New York, USA, pp. 618-621.
- Y.-H. Yang, **Y.-C. Lin**, and H.-H. Chen, "Clustering for music search results," *Proc. IEEE Int. Conf. Multimedia and Expo. 2009 (ICME'09)*, New York, USA, pp. 874-877.
- H.-T. Cheng, Y.-H. Yang, **Y.-C. Lin**, and H.-H. Chen, "Multimodal structure segmentation and analysis of music using audio and textual information," *Proc. IEEE Int. Symp. Circuits and Systems 2009 (ISCAS'09)*, Taipei, Taiwan, pp. 1677-1680.
- Y.-H. Yang, **Y.-C. Lin**, H.-T. Cheng, and H.-H. Chen, "Mr.Emo: Music retrieval in the emotion plane," *Proc. ACM Multimedia 2008 (MM'08)* (demonstration), pp. 1003-1004.
- Y.-H. Yang, **Y.-C. Lin**, H.-T. Cheng, I.-B. Liao, Yeh-Chin Ho, and H.-H. Chen, "Toward multi-modal music emotion classification," *Proc. Pacific-Rim Conf. Multimedia 2008 (PCM'08)*, pp. 70-79.
- H.-T. Cheng, Y.-H. Yang, **Y.-C. Lin**, I.-B. Liao, and H.-H. Chen, "Automatic chord recognition for music classification and retrieval," *Proc. IEEE Int. Conf. Multimedia and Expo. 2008 (ICME'08)*, Hannover, Germany, pp. 1505-1508.
- Y.-H. Yang, Y.-F. Su, **Y.-C. Lin**, and H.-H. Chen, "Music emotion recognition: The role of individuality," *Proc. ACM SIGMM Int. Workshop on Human-centered Multimedia 2007, in conjunction with ACM Multimedia (ACM MM/HCM'07)*, Augsburg, Germany, pp. 13-21.
- Y.-H. Yang, **Y.-C. Lin**, Y.-F. Su, and H.-H. Chen, "Music emotion classification: A regression approach," *Proc. IEEE Int. Conf. Multimedia and Expo. 2007 (ICME'07)*, Beijing, China, pp. 208-211.