

Lin Yu-Ching (Aaron)

Research Leader of KKBOX Inc.

Job Objective

Explore how to improve human life by research methods and technologies

Experience Summary

- 3 year experience in developing shipped 3 product features, BI dashboard and several prototypes
- 2 year experience in building a 8-person team and cooperating with 3 academic institutes
- 3 year experience in learning programming languages and techniques, and applied in real products
- 1 year experience in maintaining 2G protocol

Skill Inventory

- Programming Language: Python, Scala, C/C++, Java
- Hadoop Scripting Languages: Spark, Pig Latin, MrJob, Hive
- AWS tools: EC2, S3, Dynamodb, Redshift, AWS RDS
- Research topics
 - Music classification
 - Recommender system
 - Audio/video signal processing

Work Experience

Manager, KKBOX Inc.

- Leader of Research Center 2014.04—now
 - Initiate prototype projects and solve requests from other teams
 - Handle data or feature requests and arrange resources to solve the problem
 - Design and improve system architecture used in the team
 - Attend international conferences in behalf of company
 - ◆ 2012 ACMMM, 2013 ISMIR, 2014 ACM Recsys, 2014 ISMIR
- Project Leader of BI dashboard 2014.10—now
 - Utilize the proposed a system architecture to shorten development schedule to few weeks
 - Utilize the system to shorten the internal process of data request from days to minutes

- Project leader and developer of Recommender system v2 2014.10—now
 - Design system architecture and facilitate AWS systems to ensure scalability of the system
 - Design a system to evaluate performance in training/prediction/online stage
 - Develop internal A/B testing environment
 - Change from Pig to Spark for either coding and computational efficiency
- Project initiative of applications of auto-tagging 2014.04—now
 - Propose applications to solve problems in the existing systems
 - Resolve obstacles while progress is stuck

Assistant Manager, KKBOX Inc.

- Lead researcher of Artist-based personalized music radio v1 2013.10—2014.07
 - Developed the first recommender system for KKBOX
 - Incorporated data from 6 regions with different usage behaviors
 - Implement collaborative filtering upon Hadoop to calculate artist similarity from millions of user logs
 - Cooperated with server team to design system architecture
- Project Leader of Dashboard of user listening history 2013.11—2014.02
 - Initiated this project to understand user behaviors and aim to improve recommender system
 - Experimented prototypes to design an intuitive interactive interface
 - Demonstrated several findings to the whole company
- Lead researcher of Tag-based music radio (prototype) 2013.06—2013.10
 - Initiated this project to explore the applied possibility of auto-tagging
 - Ported MATLAB programs to Python programs for efficiency
 - Enlarged mood tags to about 100 tags, including genre and usage

Engineer, KKBOX Inc.

- Algorithm Developer of mood-specific radio 2012.05—2013.06
 - User can listen to genre/year/mood specific radio
 - Helped PM to discuss developers and to track progress

- Added several filtering methods to remove annoying songs

➤ Algorithm Developer of Tap Game

2012.05—2013.01

- Exploited rhythm detection algorithms to generate scores from audio signals
- Deployed the system for every song in KKBOX
- Received well reputation at launch, but removed due to copyright issues
- Applying a patent based on the algorithm

Protocol Engineer, MediaTek

➤ Developer of 2G MAC layer

2010.11—2012.03

- Maintained and developed modules in 2G MAC layer
- Responded to developer/customer issues

Patent

- W.-L. Chang, I.-B. Liao, **Y.-C. Lin**, Y.-H. Yang, and H.-H. Chen, "A genre-based two-layer structure for music emotion classification," Taiwan patent TWI380285 (2012/12/21).

Education

Master of Electric Engineering
in National Taiwan University

2007.09—2009.06

- Studied in music information retrieval, audio signal processing
- Published 9 conference papers and 2 journal paper
- Master thesis: Exploiting Online Tags for Music Emotion Classification
 - Experimented on more than 7000 songs and 180 tags (largest dataset then)
 - Resolved data-imbalance problem easily found in online data

Bachelor of Science of Electric Engineering
in National Taiwan University

2003.09—2007.06

- Overall grade average: 83.27, overall GPA: 3.62 / 4.00

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