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.

- ➢ Lead 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

- Lead Developer of Tap Game   2012.05—2013.01
  - Users can play any songs available in KKBOX
  - Shipped in KKBOX mobile apps
  - Developed algorithm to generate a tap-game from audio signal
  - Developed method to remove noises and detect prolonged sound

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   2007.09—2009.06
           in National Taiwan University

- 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   2003.09—2007.06
           in National Taiwan University

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

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