Minxing Liu

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EDUCATION

Peking University, Beijing, China

B.S. Candidate, Major in Computer Science — Sep 2012 – Jul 2016

- Overall GPA: 87.7 / 100 (3.71 / 4.0)
- Major GPA: 89.2 / 100 (3.78 / 4.0)
- Class Rank: 4/52

ACADEMIC HONORS & AWARDS

Best Poster Award of Peking University Young Scientists Symposium on Informatics	Nov 2015
National Scholarship (for top 5% students)	Oct 2015
Lee Wai Wing Scholarship (for top 10% students)	Oct 2014
3rd Prize of 13th ACM Programming Contest in Peking University	May 2014
Tung OOCL Scholarship (for top 10% students)	Oct 2013

PUBLICATIONS

2) M. Liu, H. Wang, Y. Guo and J. Hong, "Identifying and Analyzing the Privacy of Apps for Kids", *HotMobile'16* (Accepted)

1) M. Liu, Z. Liu, H. Wang, Y. Guo, "PerHelper: Helping Developers Make Better Decisions on Permission Uses in Android Apps", *COMPSAC'16* (Submitted)

PDF version of all publications can be found on my homepage.

RESEARCH EXPERIENCE

Mobile App Analysis (Machine Learning, Program Analysis | Python) — Jul 2015 – Oct 2015

Core group member, Supervised by **Prof. Jason I. Hong**, Carnegie Mellon University

- Made use of text mining (on app title and description), computer vision (on app icon and screenshots) and program analysis (on code snippets) techniques to extract features from mobile apps. Developed a machine learning classifier to recognize mobile apps designed for kids, with an accuracy of 94%.
- Ran the classifier on nearly a million Android apps and recognized about 68,000 apps for kids. Then conducted detailed software analysis on the apps to evaluate their privacy performances.

Contextual Dynamic QR Code (Mobile Computing | HTML, Java) — Dec 2014 – Jul 2015

Core group member, Supervised by **Prof. Kaigui Bian**, Peking University

- Designed a new scheme of QR Code whose content varies due to environmental information, e.g., location, light intensity, temperature, etc.
- Developed both client side and server side application so that users can design their own QR Code and control what to show in QR Code in different conditions.
- Utilized machine learning technique like k-means and decision trees to match the content of QR Code with the environment, which ensures the accuracy and usability of the new QR Code.

Patent accepted by State Intellectual Property Office of China, patent number: CN104820855 A

Android Permission Helper (Software Engineering & Mining | Java) — Oct 2014 – May 2015

Core group member, Supervised by **Prof. Yao Guo**, Peking University

- Conducted program analysis and data mining on 100,000 Android apps to extract the code patterns of most frequent permission-related mistakes. Summarized these mistakes in different dimensions.
- Designed an Android Studio plug-in to help Android developers detect and fix permission-related problems in the development phase. Justified its performance through case studies on 100 popular open-source apps and user studies on 20 people.

WORK EXPERIENCE

Software Engineer Intern, Location Based Service Department, Baidu Inc. Sep 2015 – Present

- Got familiar with the architecture of manual intervention system in two days. Then made extensions to the system to support more interfaces for information intervention.
- Made use of text mining techniques on data query logs to filter out key information. Set up a MapReduce framework to improve efficiency. Then visualized the information to frontend for further analysis.

SELECTED COURSE PROJECTS

Face Emotion Analysis App on WeChat (HTML, Python | Group Leader)	Spring 2015
NACHOS Operating System Implementation (C++ | Independent)	Spring 2015
RaceTrack Memory Optimization (C++ | Group Leader)	Fall 2015
Handwriting Number Recognition GUI System (C++ | Group Leader)	Spring 2014
Frequent Pattern Mining on Supermarket Data (C++ | Independent)	Fall 2013
CMU 15-213 labs (C, Assembly | Independent)	Fall 2013

SKILLS

Programming: C++, C, Java, Python, Shell, Web
Tools: Git, Weka, Scikit-Learn, Matlab, OpenCV, STATA
English: TOEFL 108 (L30+R28+S23+W27) | GRE V158 (79%), Q168 (95%), AW 3.0 (15%)