

Yutian Tang

Curriculum Vitae

Education

- 2013–2017 **Ph.D.**, *The Hong Kong Polytechnic University*, Hong Kong.
Department of Computing
- 2009–2013 **Bachelor**, *Jilin University*, Changchun, P.R.China.
Department of Computer Science and Technology

Working Experience

- 2017–2017 **Part-time Research Assistant**, *Department of Computing*, The Hong Kong Polytechnic University.
Involve in RGC project with Hong Kong Government.
 - Implement a crawler tool named *inappcrawler* for Google Play with Scrapy framework;
 - Decompile and analyse the Google Service Framework with Apktool, dex2jar, and JD;
 - Implement an Android app testing tool named mumu;
- 2014–2015 **Part-time Student Helper**, *Educational Development Centre*, The Hong Kong Polytechnic University.
 - Enrol in course team for designing course material and present those online;
 - Develop the front-end webpage for the department;
 - Skill-set: HTML, CSS, JS, JQuery, Android, Java backend;
 - Tools: Android Studio, Dreamweaver;
 - Ability: Programming, problem solving, team work;

Publications

- 2017 **Yutian Tang**, Xiapu Luo, Ting Chen, Hareton Leung, "Towards Feature Persistence: From an Annotated Legacy to Product Variants". *submitted to IEEE Transactions on Software Engineering (TSE) under review*
- 2017 **Yutian Tang**, Hareton Leung, "StiCProb: A Novel Feature Mining Approach Using Conditional Probability", *In Proceedings of 24th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)* pp 45-55.(Core B;CCF B)
- 2017 **Yutian Tang**, Hareton Leung, "Constructing Feature Model by Identifying Variability-aware Modules", *In Proceedings of 25th IEEE International Conference on Program Comprehension (ICPC)* pp 263-274.(CCF B)
- 2015 **Yutian Tang**, Hareton Leung, "Top-down Feature Mining Framework for Software Product Line", *In Proceedings of International Conference on Enterprise Information System (ICEIS)* pp 71-81.

- 2015 **Yutian Tang**, Hareton Leung, “Feature Mining for Product Line Construction”, *In Proceedings of The First International Conference on Advances and Trends in Software Engineering* pp 29-33.

Professional Qualifications & Membership

- 2017 Member of ISACA
2017 Student Member of IEEE
2017 Student Member of Hong Kong Computer Society
2012 Intermediate Title of Software Engineer (China Qualification Certificate of Computer Science Technology Proficiency)

Projects and Tools

- 2017.9-
current **Mumu: An Extension of Monkeyrunner for Testing Android Apps.**
- Implement a wrapper for Monkeyrunner testing tool, with additional function of recording testing script, playback, and collecting extra information during execution;
 - Implement a tool for monkey log understanding;
 - Skillset: IntelliJ, Java, Android;
- 2017.9-
2017.11 **calIDE, Colored IDE for Android Apps.**
- Implement an colored IDE as an Android Studio plugin, which allows developers to highlight color fragments with different background colors;
 - calIDE allows developers find functions/service and underlying interactions between these service;
 - Skillset: IntelliJ, Java, Android;
- 2017.7-
2017.8 **Google-Play-Spider and APK understanding Tool.**
- Hong Kong SAR government project under RGC entitled “Improving Mobile Users’ Privacy Decisions via Exposing Unexpected Sensitive Operations in Hardened Apps”;
 - Implements a crawler tool for scanning and downloading free apks from Google Play with Scrapy framework and SQLite DB;
 - Skillset: Scrapy, SQLite, Python;
- 2016-2017 **TypeC, Eclipse plugin toolkit for conditional compilation with CDT.**
- Rewrite the CDT parser for processing all possible configuration options with a single scanning;
 - Implement the analysis framework for understanding configuration and find valid configuration with a single iteration;
 - Skillset: Java, Eclipse CDT, plugin, C;
 - URL:<http://www.chrisyttang.org/typec/>
- 2016-2017 **LoongFMR, Eclipse plugin toolkit for product line architecture understanding with JDT.**
- Implement the main framework, comparison approaches using graph optimisation, NLP, and static analysis;
 - Except the static analysis, architectures are extracted and presented;
 - Skillset: Java, Eclipse JDT, plugin;
 - URL:http://www.chrisyttang.org/loong_fmr/

- 2015-2016 **Loong**, *Eclipse plugin toolkit for product line understanding with JDT*.
- Implement the main framework and details for product line analysis;
 - Implement static analysis, including build the program database(AST based), control flow, data flow, points-to analysis;
 - Data extraction and analysis with R;
 - Skillset: Java, Eclipse JDT, plugin;
 - URL:<http://www.chrisyttang.org/loong/>
- 2015-2016 **Course project**, *P2P data sharing toolkit on Android*.
- A course project, which aims at implementing a p2p data sharing;
 - Enable p2p chat, audio/video transformation/sharing over XMPP and SIP;
 - Skillset: Android, Socket;
 - Implement the data sharing module for text, video, and audio;

Skills

- OO Programming: Java, Python, C++, Android;
- Web: HTML, CSS, JS, JQuery, Java, Php, Spring+MyBatis;
- DB: MySQL, MongoDB;
- Framework: Eclipse (JDT, CDT), IntelliJ, Soot, Boot, Eclipse plugin, Matlab;
- Android-related tools: Apktool, dex2jar, Robotium, Monkeyrunner;

Teaching

- 2016–2017(1) **COMP3235**, *Software Project Management*, PolyU-Bachelor Degree Course, Department of Computing.
- 2016–2017(2) **COMP3233**, *Software Testing and Quality Assurance*, PolyU-Bachelor Degree Course, Department of Computing.
- 2015-2016(1) **COMP4911**, *Capstone Project*, PolyU-Bachelor Degree Course, Department of Computing.
- 2015-2016(2) **COMP3211**, *Software Engineering*, PolyU-Bachelor Degree Course, Department of Computing.
- 2014-2015 **COMP3235**, *Software Project Management*, PolyU-Bachelor Degree Course, Department of Computing.
- 2013-2014(1) **COMP309**, *System Programming*, PolyU-Bachelor Degree Course, Department of Computing.
- 2013-2014(2) **COMP322**, *Enterprise Information Systems Project Implementation*, PolyU-Bachelor Degree Course, Department of Computing.

Referees

- Dr. Hareton Leung, Associate Professor, Email: cshleung@comp.polyu.edu.hk;
- Dr. Ting Chen, Associate Professor, Email: brokendragon@uestc.edu.cn;
- Dr. Liu Yan Wang, Dennis, Teaching Fellow, Email: csdennis@comp.polyu.edu.hk