Zhongpeng Lin

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Technical Skills

Bazel, Go, Python, Java, R

Experience

Software Development

Uber Technologies **Seattle, WA, USA**
Software Engineer *2017–present*
Building the monolithic code repository for all Go code in Uber.

- Developing and optimizing Bazel and its build rules
- Developing Gazelle and its extensions to generate build rules, and thus becoming the No. 2 contributor to Bazel Gazelle project on Github
- Optimizing Go's official mock generator
- Developing dependency manager based on Go modules
- Developing Buck macros and adding Go support to Facebook Buck project

Microsoft Corporation **Redmond, WA, USA**
Software Engineer *2015–2017*
Building statistical models for the Windows build system, in order to detect abnormal processes, identify factors affecting build time, provide estimates for build time, and propose measures for Windows build performance at different granularity

University of California **Santa Cruz, CA, USA**
Graduate Student Researcher *2010 – 2015*
Projects:

- Worked on CHEKOFV project, funded by DARPA's CSFV program, that tried to build games for crowd sourced formal verification. In the first game, *Xylem*, I worked as the main backend (Node.js and Express) developer and one of key developers of the game client (ActionScript 3). In the second game, *Binary Fission*, I worked as the main backend (Python and Flask) developer.
- Worked on a NASA funded project *Understanding the Design Space of Mixed Initiative Robot Design Tools*, developed the prototype, *Botprint* in JavaScript. It used Raphael.js to sketch the robot chassis in 2D, and Three.js to render it in 3D.
- Worked on a NSF funded project on bug prediction. Extended the open source project *CVSAnalY* to identify commits that introduce buggy code chunks.

Microsoft Corporation **Redmond, WA, USA**
SDET Intern *2014*
Built machine learning models to predict Windows build time and analyzed factors are most likely to cause build breaks

Google Inc. **Mountain View, CA, USA**
Software Engineering Intern *2013*
Developed a JavaScript fuzzer that generates random JavaScript to test Closure Compiler.

Academic Services

The International Conference on Mining Software Repositories (MSR)
Member of Program Committee *2017, 2020*

Information and Software Technology
Reviewer *2014 – 2015*
Reviewed manuscript No. INFSOF-D-14-00238 and INFSOF-D-14-00238R1

The Working Conference on Mining Software Repositories (MSR)
Reviewer *2014, 2012*
Reviewed Submission #10 and #19 in 2014, Submission #46 and #55 in 2012

The 35th International Conference on Software Engineering (ICSE 2013) **San Francisco, CA**
Student Volunteer *2013*

The 25th IEEE International Conference on Software Maintenance
Subreviewer *2009*
Reviewed Submission #157

Teaching

University of California **Santa Cruz, CA, USA**
Teaching Assistant *2011*
Courses: *Machine Learning and Data Mining*, *Introduction to Database Management Systems*, and *Introduction to Computer Science*

Education

University of California **Santa Cruz, CA, USA**
PhD, Computer Science, GPA: 3.89/4.00 *2010 – 2015*
- Thesis topic: Understanding and Simulating Software Evolution
- Research areas: Software evolution, software repository mining
- Courses: *Information Retrieval*, *Machine Learning*, *Artificial Intelligence*, *Analysis of Algorithms*, *Mathematical Statistics*

Institute of Software, Chinese Academy of Sciences (ISCAS) **Beijing, China**
MS, Computer Software and Theory, GPA: 87.9/100 *2007 – 2010*
- Research areas: software cost estimation, software bug prediction
- Courses: *Advanced Data Mining*, *Advanced Software Engineering*
- Honors and awards: *Outstanding Student* of 2009, available to top 15% graduate students

Xiamen University **Xiamen, China**
BS, Software Engineering, GPA: 90.0/100 *2003 – 2007*
- Honors and Awards
  - *Distinguished Graduate* of 2007, available to top 3% graduates by GPA each year
  - *China Construction Bank Scholarship* of 2006 and 2007, available to top 5% by GPA undergraduate students each year
  - *Xiamen University First-Rank Scholarship* of 2004 and 2005, available to top 5% by GPA undergraduate students each year

Publications

Kate Compton, Heather Logas, Joseph C. Osborn, Chandranil Chakrabortti, Kelsey Coffman, Daniel Fava, Dylan Lederle-Ensign, Zhongpeng Lin, Joe Mazeika, Afshin Mobramaein, Jonathan Pagnutti, Huascar Sanchez , Jim Whitehead, Brenda Laurel and John Murray. Design lessons from binary fission: A crowd sourced game for precondition discovery. In *Proceedings of 1st International Joint Conference of DiGRA and FDG*, Dundee, Scotland, UK, 2016.

Zhongpeng Lin. *Understanding and Simulating Software Evolution*. PhD thesis, University of California, Santa Cruz, December 2015.

Zhongpeng Lin and Jim Whitehead. Why power laws? an explanation from fine-grained code changes.

In *Proceedings of the 12th Working Conference on Mining Software Repositories* (*MSR 2015*), pages 68–75, Florence, Italy, May 2015.

Kate Compton, Dylan Lederle-Ensign, Zhongpeng Lin, Joe Mazeika, Afshin Mobramaein, Jonathan Pagnutti, Huascar Sanchez and Jim Whitehead. Botprint: Casual robotic evolution. In *Computational Creativity and Games Workshop*, Park City, UT, USA, 2015.

Zhongpeng Lin and Jim Whitehead. Using fine-grained code change metrics to simulate software evolution. In *Proceedings of the 5th International Workshop on Emerging Trends in Software Metrics* (*WETSoM 2014*), pages 15–18, Hyderabad, India, June 2014. ACM Press.

Heather Logas, Jim Whitehead, Michael Mateas, Richard Vallejos, Lauren Scott, Dan Shapiro, John Murray, Kate Compton, Joseph Osborn, Orlando Salvatore, Zhongpeng Lin, Huascar Sanchez, Michael Shavlovsky, Daniel Cetina, Shayne Clementi and Chris Lewis. Software verification games: Designing Xylem, the code of plants. In *Proceedings of the 9th International Conference on the Foundations of Digital Games* (*FDG 2014*), 2014.

Zhongpeng Lin, Chris Lewis, Sri Kurniawan, and Jim Whitehead. Why players start and stop playing a Chinese social network game. *Journal of Gaming & Virtual Worlds*, 5(3):307–328, 2013.

Zhongpeng Lin. Understanding and simulating software evolution. In *Proceedings of the 35th International Conference on Software Engineering* (*ICSE 2013*), pages 1411–1414, San Francisco, CA, USA, May 2013. IEEE/ACM.

Chris Lewis, Zhongpeng Lin, Caitlin Sadowski, Xiaoyan Zhu, Rong Ou, and E. James Whitehead Jr. Does bug prediction support human developers? findings from a google case study. In *Proceedings of the 35th International Conference on Software Engineering* (*ICSE 2013*), pages 372–381, San Francisco, CA, USA, May 2013. IEEE/ACM.

Caitlin Sadowski, Chris Lewis, Zhongpeng Lin, Xiaoyan Zhu, and E. James Whitehead. An empirical analysis of the fixcache algorithm. In *Proceeding of the 8th Working Conference on Mining Software Repositories* (*MSR 2011*), pages 219–222, Honolulu, HI, USA, May 2011. ACM Press.

Jing Du, Ye Yang, Zhongpeng Lin, Qing Wang, Mingshu Li, and Feng Yuan. A case study on usage of a software process management tool in china. In *Proceedings of the 2010 Asia Pacific Software Engineering Conference*, pages 443–452, Sydney, Australia, November 2010. IEEE Computer Society.

Zhongpeng Lin, Fengdi Shu, Ye Yang, Chenyong Hu, and Qing Wang. An empirical study on bug assignment automation using chinese bug data. In *Proceedings of the 3rd International Symposium on Empirical Software Engineering and Measurement*, pages 451–455, Lake Buena Vista, FL, USA, October 2009. IEEE.