Xianhao Jin

Tel: (+1) 540-257-3084   Email: xianhao8@vt.edu   Homepage: http://xianhaoj.com

Education
- **Virginia Tech (VT) - Ph.D.**   Aug.2017 – May.2022
  - Major: Computer and Information Science (GPA: 3.81 / 4)
- **Tongji University (TJU) - B.Eng.**   Sept.2013 – June.2017
  - Major: Software Engineering (GPA: 81.5 / 100)

Employment
- **Software Engineer,** ByteDance   July.2022 – Present
  - Design pipeline-as-code and infra-as-code system for CI.
  - Support monorepo project.
- **Software Engineer Intern (PhD),** Facebook   May.2021 – Aug.2021
  - Simulate Continuous Integration system at Facebook to validate potential changes.
  - Design a new policy to improve resource allocation (mean value of job waiting time reduces 13.11% at targeted projects).
- **Graduate Research and Teaching Assistant**, Virginia Tech   Aug.2017 – May.2022
  - Data analysis on cost and savings in Continuous Integration, Stack Overflow, and code completion system.
  - Hold labs and office hours for courses Comparative Language, Database Management, and Intermediate Software Design and Engineering.
- **DevOps Intern**, Information Supporting at Michelin (China)   May.2016 – Dec.2016
  - Monitor the software development process and deploy a Continuous Integration test system with data visualization.

Selected Publications
1. **Xianhao Jin**, Francisco Servant. "HybridCISave: A Combined Build and Test Selection Approach in Continuous Integration". Transactions on Software Engineering and Methodology (TOSEM), 2022.
2. **Xianhao Jin**, Francisco Servant. "Which Builds Are Really Safe to Skip? Maximizing Failure Observation for Build Selection in Continuous Integration". Journal of Systems and Software (JSS), 2022, 21 pages.
3. **Xianhao Jin**, "Reducing Cost in Continuous Integration with A Collection of Build Selection Approaches". Proceedings of the 29th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, Doctoral Symposium Track (ESEC/FSE '21), August 23–28, 2021, Athens, Greece.
4. **Xianhao Jin**, Francisco Servant, "CIBench: A Dataset and Collection of Techniques for Build and Test Selection and Prioritization in Continuous Integration". Proceedings of the 43rd International Conference on Software Engineering: Companion Proceedings (ICSE'21-Companion), Madrid, Spain, May 2021, to appear.
5. **Xianhao Jin**, Francisco Servant, "What helped, and what did not? An Evaluation of the Strategies to Improve Continuous Integration". Proceedings of the 43rd International Conference on Software Engineering, Technical Research Track (ICSE 2021), Madrid, Spain, May 2021, to appear. Acceptance Rate: 22%.

6. **Xianhao Jin**, Francisco Servant, "A Cost-efficient Approach to Building in Continuous Integration". Proceedings of the 42nd International Conference on Software Engineering (ICSE 2020), Seoul, South Korea, May 2020. Acceptance Rate: 21%.
7. **Xianhao Jin**, Francisco Servant, "What Edits Are Done on Highly Answered Stack Overflow Questions? An Empirical Study". Proceedings of the 16th International Conference on Mining Software Repositories, Mining Challenge Track (MSR 2019), Montreal, Canada, May 2019, pp. 225–229.
8. **Xianhao Jin**, Francisco Servant, "The Hidden Cost of Code Completion: Understanding the Impact of the Recommendation-list Length on its Efficiency". Proceedings of the 15th International Conference on Mining Software Repositories, Mining Challenge Track (MSR 2018), Gothenburg, Sweden, May 2018, pp. 70–73.

Highlighted Research and Projects
- CI computing resource allocation optimization.   May.2021 - Aug.2021
    - Apply a Discrete Event Simulation of Continuous Integration system.
    - Design an improved mechanism for transferring computing resources.
- Evaluation of CI-improving strategies. (Paper published)   Feb.2018 - Present
    - Replicate and compare techniques that can improve Continuous Integration.
    - Evaluate different comparing metrics on various dimensions.
- Cost-efficiency in Continuous Integration. (Paper published)   Feb.2018 - Dec.2019
    - Apply empirical data analysis on features that relate to failed builds.
    - Build machine learning classifiers to predict failed builds.
- Data analysis in Stack Overflow question edits. (Paper published)   Nov.2018 - Mar.2019
    - Apply empirical data analysis on what edits result in better answer collection.
- Data analysis in the Code completion system. (Paper published)   Nov.2017 - Mar.2018
    - Apply empirical data analysis on code completion recommendation lengths.
- Squarified Treemaps for Finance Stock.   Nov.2017 - Mar.2018
    - Use Processing to implement the "squarify" method to show stock prices.
- Automatic Developer-to-Fault assignment & visualization.   Aug.2017 - Dec.2017
    - Apply a fuzzy fine-grained history graph to improve fault localization techniques.

Awards
- Dec.2020: Virginia Tech Graduate fellowship.
- Jun.2019: SIGSOFT CAPS travel grant.
- Jun.2019: Virginia Tech GSA travel grant.
- Jun.2018: Virginia Tech GSA travel grant.

Activities
- Apr.2023: TSE'23 reviewer.
- Feb.2023: MSR'23 junior PC.
- May.2021: Attended ICSE'21, made a presentation for an accepted paper on ICSE 2021.
- Mar.2021: Made a presentation for VT Lightning Talks.
- Jan.2021: Shadow PC member for MSR'21.
- Jul.2020: Attended ICSE'20, made a presentation for an accepted paper on ICSE 2020.
- Jun.2019: Attended ICSE'19, made a presentation for an accepted paper on MSR 2019.
- Jun.2018: Attended ICSE'18, made a presentation for an accepted paper on MSR 2018.