Bowen Xu

Research Scientist (Postdoc)
School of Computing and Information Systems
Singapore Management University

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Research Interests and Past Works

■ Program Comprehension   ✓ (Pre-trained) Language Model of Code

★ Software Text Analytics   ● Vulnerability/Defect Prediction

[J]: Journal Papers   [C]: Conference Papers   [T]: Tool Demo Papers   [W]: Workshop Papers

ASE'22
CORE-A*
[C15] ✓ Jieke Shi, Zhou Yang, **Bowen Xu**, Hong Jin Kang, David Lo. "Compressing Pre-trained Models of Code into 3 MB". *The 37th IEEE/ACM International Conference on Automated Software Engineering. (ASE 2022).* ***Nominated for ACM SIGSOFT Distinguished Paper Award***

ASE'22
CORE-A*
[C14] ★ Chengran Yang, **Bowen Xu**, Ferdian Thung, Yucen Shi, Ting Zhang, Zhou Yang, Xin Zhou, Jieke Shi, Junda He, DongGyun Han, David Lo. "Answer Summarization for Technical Queries: Benchmark and New Approach". *The 37th IEEE/ACM International Conference on Automated Software Engineering. (ASE 2022).*

ESEC/FSE'22
CORE-A*
[C13] ✓ Yucen Shi, Ying Yin, Zhengkui Wang, David Lo, Tao Zhang, Xin Xia, Yuhai Zhao, **Bowen Xu**. "How to Better Utilize Code Graphs in Semantic Code Search?". *The 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2022).*

ICPC'22
CORE-A
[C12] ★ Junda He, **Bowen Xu**, Zhou Yang, DongGyun Han, Chengran Yang and David Lo. "PTM4Tag: Sharpening Tag Recommendation of Stack Overflow with Pre-trained Models". *30th ACM/IEEE International Conference on Program Comprehension (ICPC 2022).* ***Invited to Empirical Software Engineering Journal***

SANER'22
CORE-A
[C11] ✓ Jieke Shi, Zhou Yang, Junda He, **Bowen Xu** and David Lo. "Can Identifier Splitting Improve Open-Vocabulary Language Model of Code?". *29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER 2022).* Accepted as a ERA track Paper.

SANER'22
CORE-A
[C10] ★ Chengran Yang, **Bowen Xu**, Junaed Younus Khan, Gias Uddin, Donggyun Han, Zhou Yang and David Lo. "Aspect-Based API Review Classification: How Far Can Pre-Trained Transformer Model Go?". *29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER 2022).*

TSE'21
CORE-A*
[J3] ★ **Bowen Xu**, HOANG Van Duc Thong, Abhishek SHARMA, Xin Xia, and David Lo. "Post2Vec: Learning Distributed Representations of Stack Overflow Posts". *IEEE Transactions on Software Engineering (TSE).* ***Presented during ICSE 2022 as part of the Journal First Paper Track***

EMSE'20
CORE-A
[J2] ■ **Bowen Xu**, Le An, Ferdian Thung, Foutse Khomh, David Lo. "Why Reinventing the Wheels? An Empirical Study on Library Reuse and Re-implementation". *Empirical Software Engineering*

(EMSE). *Presented during ICSE 2020 as part of the Journal First Paper Track*

ICSME'20
CORE-A

[C9] ★ Ting Zhang, **Bowen Xu**, Ferdian Thung, Stefanus Agus Haryono, David Lo, Lingxiao Jiang. "Sentiment Analysis for Software Engineering: How Far Can Pre-trained Transformer Models Go?". *36th IEEE International Conference on Software Maintenance and Evolution (ICSME 2020).*

ESEC/FSE'19
CORE-A*

[T2] ★ Liang Cai, Haoye Wang, **Bowen Xu**, Qiao Huang, Xin Xia, David Lo, Zhenchang Xing. "AnswerBot: An Answer Summary Generation Tool Based on Stack Overflow". *The 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2019).*

AAAI'19
RCQA

[W1] ★ Amirreza Shirani, **Bowen Xu**, David Lo, Thamar Solorio and Mohammad Amin Alipour. "Question Relatedness on Stack Overflow: The Task, Dataset, and Corpus-inspired Model". *AAAI 2019 Reasoning and Complex QA Workshop.*

PAKDD'19
CORE-A

[C8] ■ Heng-Yi Li, Shu-Ting Shi, Ferdian Thung, Xuan Huo, **Bowen Xu**, Ming Li, and David Lo. "DeepReview: Automatic Code Review using Deep Multi-Instance Learning". *The 23rd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2019).*

ESEM'18
CORE-A

[C7] ✓ **Bowen Xu**, Amirreza Shirani, David Lo and Mohammad Amin Alipour. "Prediction of Relatedness in Stack Overflow: Deep Learning vs. SVM - A Reproducibility Study". *12th International Symposium on Empirical Software Engineering and Measurement (ESEM 2018).* ***Highly Commended Full Paper Award***

ASE'17
CORE-A*

[C6] ★ **Bowen Xu**, Zhenchang Xing, Xin Xia, David Lo. "AnswerBot - Automated Generation of Answer Summary to Developers' Technical Questions". *32nd IEEE/ACM International Conference on Automated Software Engineering (ASE 2017).*

EMSE'17
CORE-A

[J1] ★ **Bowen Xu**, Zhenchang Xing, Xin Xia, David Lo, Shanping Li. "Domain-Specific Cross-Language Relevant Question Retrieval". *Empirical Software Engineering (EMSE).*

ESEC/FSE'17
CORE-A*

[T1] ★ **Bowen Xu**, Zhenchang Xing, Xin Xia, David Lo. "XSearch: A Domain Specific Cross-Language Relevant Question Retrieval Tool". *The 25th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2017).*

ASE'16
CORE-A*

[C5] ★ **Bowen Xu**, Deheng Ye, Zhenchang Xing, Xin Xia, Guibin Chen, Shanping Li. "Predicting Semantically Linkable Knowledge in Developer Online Forums via Convolutional Neural Network". *31st IEEE/ACM International Conference on Automated Software Engineering (ASE 2016).*

ASE'16
CORE-A*

[C4] ★ Guibin Chen, Chunyang Chen, Zhenchang Xing, **Bowen Xu**. "Learning Dual-Language Vector Space for Domain-specific Cross-Lingual Question Retrieval". *31st IEEE/ACM International Conference on Automated Software Engineering (ASE 2016).*

MSR'16
CORE-A

[C3] ★ **Bowen Xu**, Zhenchang Xing, Xin Xia, David Lo, Qingye Wang, Shanping Li. "Domain-Specific Cross-Language Relevant Question Retrieval". *13th International Conference on Mining Software Repositories (MSR 2016).* ***Invited to Empirical Software Engineering Journal***

ICECCS'15
CORE-B

[C2] ● Yun Zhang, David Lo, Xin Xia, **Bowen Xu**, Jianling Sun, Shanping Li. "Combining Software Metrics and Text Features for Vulnerable File Prediction". *20th International Conference on Engineering of Complex Computer Systems (ICECCS 2015).*

APSEC'15
CORE-B

[C1] ● **Bowen Xu**, David Lo, Xin Xia, Ashish Sureka, Shanping Li. "EFSPredictor: Predicting Configuration Bugs With Ensemble Feature Selection". *22th Asia-Pacific Software Engineering Confer-*

ence (APSEC 2015).

Teaching

2022	Guest Instructor, Singapore Management University, IS706 - Software Mining and Analysis
2020	Teaching Assistant, Singapore Management University, IS706 - Software Mining and Analysis
	Students' Feedback: https://tinyurl.com/1t9xklsh
2019	Graduate Instructor Certification, Singapore Management University, Singapore.

Education

2017-2021	**Ph.D Degree** in School of Computing and Information Systems, Singapore Management University, Singapore
	Supervised by Prof. David Lo
2014-2017	**Master Degree** in School of Software Technology, Zhejiang University, China
	Supervised by Prof. Shanping Li and Prof. Xin Xia
2010-2014	**Bachelor Degree** in College of Computer Science and Technology, Hunan City University, China

Working Experience

August, 2021 - Present	**Research Scientist (Post-Doc)** in Software Analytics Research Group, Singapore Management University, Singapore
	Work with Prof. David Lo
Feb - July, 2016	**Research Assistant** in Software Engineering Lab, Nanyang Technological University, Singapore
	Work with Prof. Zhenchang Xing

Research Mentoring

Ting Zhang, PhD on the work ICSME'20

Chengran Yang, PhD on the work TSE'21, SANER'22, ASE'22

Jieke Shi, PhD on the work SANER'22, ASE'22

Junda He, PhD on the work ICPC'22

Professional Services

Journal Referee for TOSEM'22 and EMSE'22, TOIS'20 and JSS'20.

Co-Organizer for the workshop MaLTeSQuE'22 (collocated with ESEC/FSE'22).

Program Committee for MSR'22.

Certifications, honors *&* awards

2020	Dean's List (top3%), Singapore Management University, Singapore.
2020	Presidential Doctoral Fellowship (top3%), Singapore Management University, Singapore.

2017   Excellent Graduate of Zhejiang Province, Ministry of Education of the People's Republic of Zhejiang Province (top3%), China.

References

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Dr. Foutse Khomh
Full Professor
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