Iftekhar Ahmed

Associate Professor
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1. EDUCATION

June 2018 — *Ph.D.,* Computer Science, Oregon State University, Corvallis, OR

April 2007 — *B.S.,* Computer Science and Engineering, Shah Jalal University of Science and Technology, Bangladesh

2. EMPLOYMENT HISTORY

Associate Professor — 7/2024-Ongoing
Department of Informatics
Donald Bren School of Information and Computer Sciences
University of California, Irvine

Assistant Professor — 7/2018-7/2024
Department of Informatics
Donald Bren School of Information and Computer Sciences
University of California, Irvine

Faculty Member — 7/2018-Ongoing
Institute for Software Research
University of California, Irvine

Senior Executive — 05/2008-08/2011
Operations/Technology,
Grameenphone Ltd.
Dhaka, Bangladesh

System Engineer, — 06/2007-05/2008
IT Operations,
Grameenphone Ltd.
Dhaka, Bangladesh

3. RESEARCH INTERESTS

My research interests include the field of software engineering, with a focus on combining testing, static analysis, socio-technical factors analysis, and machine learning approaches to help improve software quality under real-world conditions.

4. HONORS, AWARDS, AND STATISTICS

INTERNATIONAL AWARDS AND HONORS

Fellowship	IBM Ph.D. Fellowship	2016-2017
	IBM Ph.D. Fellowship	2017-2018

5. RESERACH GRANTS

[G.20]	National Science Foundation (NSF) "Increasing Computer Science Undergraduate Retention through Predictive Modeling and Early, Personalized Academic Interventions" Investigator: Sergio Gago Masague, Jennifer Wong-Ma, and **Iftekhar Ahmed** Award amount: $ 500,000
[G.19]	Information and Computer Sciences Research Award 2024 "Unlocking Insights: Innovations in Qualitative Research Leveraging Large Language Models." Investigator: **Iftekhar Ahmed** and Gillian Hayes Award amount: $75,000
[G.18]	National Science Foundation (NSF) "Improving the Mental Well-being and Productivity of the Software Development Workforce of Tomorrow" Investigator: André van der Hoek, **Iftekhar Ahmed**, Madhu Reddy, and Stephen Schueller Award amount: $ 1,644,486
[G.17]	National Science Foundation (NSF) "Automated Software Engineering Techniques for Improving the Accessibility of Software" Investigator: Sam Malek, **Iftekhar Ahmed** and Stacy Branham Award amount: $1,199,986
[G.16]	Information and Computer Sciences Research Award 2023 "Tailoring Latine's Skills Training to Broaden their Participation in Software Engineering." Investigator: Sergio Gago-Masague and **Iftekhar Ahmed** Award amount: $75,000
[G.15]	eBay "Identifying Duplicate Effort Leveraging Communication, Issue tracker and Source Code for Improving Effort Visibility and Productivity" Investigator: **Iftekhar Ahmed** (Sole PI) Award amount: $150,000
[G.14]	Academic Senate Council on Research, Computing and Libraries (CORCL) Award 2023 "Exploring Creativity and Its Impact on Software Engineering" Investigator: **Iftekhar Ahmed** (Sole PI) Award amount: $5,400
[G.13]	eBay "Leveraging Issue Information For Improving Productivity" Investigator: **Iftekhar Ahmed** (Sole PI) Award amount: $150,000
[G.12]	Academic Senate Council on Research, Computing and Libraries (CORCL) Award 2021 "Fostering Latinx+ Inclusion in Software Development Industry" Investigator: **Iftekhar Ahmed** (Sole PI) Award amount: $5,021
[G.11]	eBay "From Defects to Actionable Productivity Insights" Investigator: **Iftekhar Ahmed** (Sole PI) Award amount: $130,000

[G.10] Information and Computer Sciences Research Award 2021
"AI Driven Adaptive Remote Attestation for Mobile Ad-hoc Networks."
Investigator: Ian Harris, Elaleh Bozorgzadeh and **Iftekhar Ahmed**
Award amount: $75,000

[G.9] Information and Computer Sciences Research Award 2021
"Towards Active Listening Conversational Agents to Support Software Testing Education."
Investigator: David Redmiles and **Iftekhar Ahmed**
Award amount: $75,000

[G.8] TeachAccess
"Testing for Accessibility"
Investigator: **Iftekhar Ahmed** (Sole PI)
Award amount: $5,000

[G.7] Information and Computer Sciences Research Award 2020
"Toward Stemming Accessibility Issues in Software"
Investigator: Sam Malek, **Iftekhar Ahmed** and Stacy Branham
Award amount: $75,000

[G.6] Information and Computer Sciences Research Award 2020
"Towards Automated Quality Assurance of Conversational Agents"
Investigator: **Iftekhar Ahmed** and Ian Harris
Award amount: $75,000

[G.5] Information and Computer Sciences Research Award 2020
"The Dark Side of Software Engineering: Stimulant Use among Software Professionals"
Investigator: Andre van der Hoek and **Iftekhar Ahmed**
Award amount: $75,000

[G.4] Information and Computer Sciences Inspiration Award 2020
Exploring the Unexplored in Social Software Development Platforms
Investigator: David Redmiles and **Iftekhar Ahmed**
Award amount: $10,000

[G.3] Information and Computer Sciences Inspiration Award 2019
Exploring the Unexplored in Social Software Development Platforms
Investigator: David Redmiles and **Iftekhar Ahmed**
Award amount: $10,000

[G.2] Information and Computer Sciences Inspiration Award 2019
Software Analysis Tool Marketplace for Ensuring Tool Quality
Investigator: Jim Jones and **Iftekhar Ahmed**
Award amount: $10,000

[G.1] Academic Senate Council on Research, Computing and Libraries (CORCL) award 2019
Investigator: **Iftekhar Ahmed** (Sole PI)
Award amount: $2,885

6. PUBLICATIONS

6.1 JOURNAL ARTICLES

[J.16] Roselane Silva Farias, **Iftekhar Ahmed,** Eduardo Santana de Almeida, "What Makes a Great Software Quality Assurance Engineer?" IEEE Transactions on Software Engineering (TSE) (February 2025): pp. 1153-1172. https://doi.org/10.1109/TSE.2025.3542763

[J.15] **Iftekhar Ahmed**, Aldeida Aleti, Haipeng Cai, Alexander Chatzigeorgiou, Pinjia He, Xing Hu, Mauro Pezzè, Denys Poshyvanyk, Xin Xia. "Artificial Intelligence for Software Engineering: The Journey so far and the Road ahead". ACM Transactions on Software Engineering and Methodology (TOSEM), (April 2025): pp. 1-25. https://doi.org/10.1145/3719006

[J.14] Misu, Md Rakib Hossain, Jiawei Li, Adithya Bhattiprolu, Yang Liu, Eduardo Santana de Almeida, and **Iftekhar Ahmed**. "Test smell: A parasitic energy consumer in software testing." Information and Software Technology (IST), (January 2025). https://doi.org/10.1016/j.infsof.2025.107671

[J.13] Yaroslav Golubev, Agnia Sergeyuk, Timofey Bryksin, **Iftekhar Ahmed.** "Using AI-Based Coding Assistants in Practice: State of Affairs, Perceptions, and Ways Forward" Information and Software Technology (IST), (January 2025). https://doi.org/10.1016/j.infsof.2024.10761s

[J.12] Balaji Balasubramaniam, **Iftekhar Ahmed**, Hamid Bagheri, Justin Bradley. "Carving Out Control Code: Automated Identification of Control Software in Autopilot Systems". ACM Transactions on Cyber-Physical Systems (11 November 2024):pp. 1-20. https://doi.org/10.1145/3678259

[J.11] Eduardo Santana de Almeida, **Iftekhar Ahmed**, André van der Hoek. "Let's Go to the Whiteboard (Again): Perceptions From Software Architects on Whiteboard Architecture Meetings". IEEE Transactions on Software Engineering (TSE) (1 October 2023): pp. 4773 - 4795. https://doi.org/10.1109/TSE.2023.3314410

[J.10] Raphael Pereira de Oliveira, Paulo Anselmo da Mota Silveira Neto, Qi Hong Chen, Eduardo Santana de Almeida, **Iftekhar Ahmed**. "Different, Really! A comparison of Highly-Configurable Systems and Single Systems". Information and Software Technology (IST) (September 2022). https://doi.org/10.1016/j.infsof.2022.107035

[J.9] Shiyue Rong, Weisheng Wang, Umme Ayda Mannan, Eduardo Santana de Almeida, Shurui Zhou, **Iftekhar Ahmed. "**An empirical study of emoji use in software development communication". Information and Software Technology (IST) (August 2022). https://doi.org/10.1016/j.infsof.2022.106912

[J.8] Dos Santos, Daniel Amador, Eduardo Santana de Almeida, and **Iftekhar Ahmed**. "Investigating replication challenges through multiple replications of an experiment". Information and Software Technology (IST) (July 2022). https://doi.org/10.1016/j.infsof.2022.106870

[J.7] Paulo Anselmo da Mota Silveira Neto, Umme Ayda Mannan, Eduardo Santana de Almeida, Nachiappan Nagappan, David Lo, Pavneet Singh Kochhar, Cuiyun Gao and **Iftekhar Ahmed.** "A Deep Dive into the Impact of COVID-19 on Software Development" IEEE Transactions on Software Engineering (TSE) (11 June 2021): pp. 1-20. https://doi.org/10.1109/TSE.2021.3088759

[J.6] Walter Takashi Nakamura, **Iftekhar Ahmed**, David Redmiles, Edson Oliveira, David Fernandes, Elaine HT de Oliveira, Tayana Conte. Are UX Evaluation Methods Providing the Same Big Picture? Sensors, 21(10), 3480 (17 May 2021). https://doi.org/10.3390/s21103480

[J.5] Josie Holmes, **Iftekhar Ahmed**, Caius Brindescu, Rahul Gopinath, He Zhang, He, Alex Groce Using Relative Lines of Code to Guide Automated Test Generation for Python. ACM Transactions

on Software Engineering and Methodology (TOSEM) (04 Sep 2020): pp. 1-38. https://doi.org/10.1145/3408896

[J.4] Caius Brindescu, **Iftekhar Ahmed**, Carlos Jensen, and Anita Sarma. An empirical investigation into merge conflicts and their effect on software quality. Empirical Software Engineering (05 Sep 2019), pp. 1-29. https://doi.org/10.1007/s10664-019-09735-4.

[J.3] Alex Groce, **Iftekhar Ahmed**, Carlos Jensen, Paul E. McKenney, and Josie Holmes. 2018. How verified (or tested) is my code? Falsification-driven verification and testing. Automated Software Engineering (01 Dec 2018), vol.25, issue 4, pp. 917–960. https://doi.org/10.1007/s10515-018-0240-y. **Invited extended journal version of [C.4]**

[J.2] Rahul Gopinath **Iftekhar Ahmed**, Mohammad Amin Alipour, Carlos Jensen and Alex Groce. 2017. Mutation Reduction Strategies Considered Harmful. IEEE Transactions on Reliability (Sept. 2017), vol. 66, issue. 3, pp. 854-874. doi: 10.1109/TR.2017.2705662.

[J.1] Rahul Gopinath, **Iftekhar Ahmed**, Mohammad Amin Alipour, Carlos Jensen, and Alex Groce. 2017. Does choice of mutation tool matter? Software Quality Journal (01 Sep 2017), vol 25, issue 3, pp. 871–920. https://doi.org/10.1007/s11219-016-9317-7.

6.2 CONFERENCE PAPERS

[C.34] Hyunjae Suh, Mahan Tafreshipour, Jiawei Li, Adithya Bhattiprolu, **Iftekhar Ahmed** "An Empirical Study on Automatically Detecting AI-Generated Source Code: How Far Are We?" In proceedings of the IEEE/ACM 47th International Conference on Software Engineering [ICSE2025] [Acceptance rate: 21%].

[C.33] Aaron Imani, **Iftekhar Ahmed,** Mohammad Moshirpour. "Context Conquers Parameters: Outperforming Proprietary LLM in Commit Message Generation" In proceedings of the IEEE/ACM 47th International Conference on Software Engineering [ICSE2025] [Acceptance rate: 21%].

[C.32] Novia Wong, Nai-Yu Cheng, Bruna Oewel, Katherine E Genuario, SarahElizabeth Stoeckl, Stephen M Schueller, Iftekhar Ahmed, André van der Hoek, Madhu Reddy. "'It's a spectrum': Exploring Autonomy, Competence, and Relatedness in Software Development Processes and Tools" In proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI). [CHI 2025] [Acceptance rate: 24.9%]. **[Honorable Mention recognition awarded to papers in the top 5% of submissions]**

[C.31] Tafreshipour, Mahan, Aaron Imani, Eric Huang, Eduardo Almeida, Thomas Zimmermann, and **Iftekhar Ahmed**. "Prompting in the Wild: An Empirical Study of Prompt Evolution in Software Repositories." In proceedings of the 22nd International conference on Mining Software Repositories (MSR). [MSR 2025] [Acceptance rate: 27%].

[C.30] Jiawei Li, David Faragó, Christian Petrov, **Iftekhar Ahmed**. "Only Diff Is Not Enough: Generating Commit Messages Leveraging Reasoning And Action Of Large Language Model". In proceedings of the 32nd ACM International Conference on the Foundations of Software Engineering (pp. 745-766) (FSE). [FSE2024] [**ACM Sigsoft Distinguished paper award**] [Acceptance rate: 21%].

[C.29] Mahan Tafreshipour, Anmol Deshpande, Forough Mehralian, **Iftekhar Ahmed**, Sam Malek. "Ma11y: A Mutation Framework for Web Accessibility Testing" In proceedings of the ACM SIGSOFT International Symposium on Software Testing and Analysis (pp. 100-111) (ISSTA). [ISSTA2024] [Acceptance rate: 21%].

[C.28] Jiri Gesi, Xinyun Shen, Yunfan Geng, Qihong Chen, **Iftekhar Ahmed**. "Leveraging Feature Bias for Scalable Misprediction Explanation of Machine Learning Models" In Proceedings of the IEEE/ACM 45th International Conference on Software Engineering (pp. 1563-1574) [ICSE2023] [Acceptance rate: 26%].

[C.27] Jiawei Li, **Iftekhar Ahmed**. "Commit Message Matters: Investigating Impact and Evolution of Commit Message Quality" In Proceedings of the IEEE/ACM 45th International Conference on Software Engineering (pp. 806-817) [ICSE2023] [Acceptance rate: 26%].

[C.26] Qihong Chen, Rúben Câmara, José Campos, André Souto, **Iftekhar Ahmed**. "The Smelly Eight: An Empirical Study on the Prevalence of Code Smells in Quantum Computing" In Proceedings of the IEEE/ACM 45th International Conference on Software Engineering (pp. 358-370) [ICSE2023] [Acceptance rate: 26%].

[C.25] Novia Wong, Victoria Felicity Jackson, André van der Hoek, **Iftekhar Ahmed**, Stephen M. Schueller, Madhu Reddy. "Mental Wellbeing at Work: Perspectives of Software Engineers" In Proceedings of the CHI Conference on Human Factors in Computing Systems (pp. 1-15). [CHI 2023] [Acceptance rate: 27.6%].

[C.24] Zixuan Feng, Amreeta Chatterjee, Anita Sarma, **Iftekhar Ahmed**. "A Case Study of Implicit Mentoring, its Prevalence, and Impact in Apache". In Proceedings of the 30th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (pp. 797-809). [FSE2022] [Acceptance rate: 22%].

[C.23] Tongjie Wang, Yaroslav Golubev, Oleg Smirnov, Jiawei Li, Timofey Bryksin, **Iftekhar Ahmed.** "PyNose: A Test Smell Detector For Python" In the Proceedings of the 36th IEEE/ACM conference on Automated Software Engineering (pp. 593-605) [ASE 2021] [Acceptance rate: 17.9%].

[C.22] Jiri Gesi, Jiawei Li, **Iftekhar Ahmed.** "An Empirical Examination of the Impact of Bias on Just-in-time Defect Prediction" In Proceedings of the 15th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (pp. 1-12) [ESEM 2021] [Acceptance rate: 19%].

[C.21] Andrew Truelove, Eduardo Santana de Almeida, **Iftekhar Ahmed. "**We'll Fix It in Post: What Do Bug Fixes in Video Game Update Notes Tell Us?" In 2021 IEEE/ACM 43rd International Conference on Software Engineering (pp. 736-747).[[ICSE 2021] [Acceptance rate: 22%].

[C.20] Amreeta Chatterjee, Mariam Guizani, Catherine Stevens, Jillian Emard, Mary Evelyn May, Margaret Burnett, **Iftekhar Ahmed**, Anita Sarma. "AID: An automated detector for gender-inclusivity bugs in OSS project pages" In 2021 IEEE/ACM 43rd International Conference on Software Engineering (pp. 1423-1435).[ICSE 2021] [Acceptance rate: 22%].

[C.19] Navid Salehnamadi, Abdulaziz Alshayban, Jun-Wei Lin, **Iftekhar Ahmed,** Stacy Branham, Sam Malek, "Latte: Use-Case and Assistive-Service Driven Automated Accessibility Testing Framework for Android" In Proceedings of the 2021 Conference on Human Factors in Computing Systems (pp. 1-11). [CHI 2021] [Acceptance rate: 26%].

[C.18] Navid Salehnamadi, Abdulaziz Alshayban, **Iftekhar Ahmed**, Sam Malek, "ER Catcher: A Static Analysis Framework for Accurate and Scalable Event-Race Detection in Android". In proceedings of 35th IEEE/ACM International Conference on Automated Software Engineering. (pp. 324-335). [ASE2020] [Acceptance rate: 22.5%].

[C.17] Umme Ayda Mannan, **Iftekhar Ahmed**, Carlos Jensen, Anita Sarma. "On the relationship between design discussions and design quality: a case study of Apache projects". In Proceedings of the 28th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (pp. 543-555). [FSE2020] [Acceptance rate: 28%].

[C.16] Navid Salehnamadi, Abdulaziz Alshayban, **Iftekhar Ahmed**, Sam Malek. "A benchmark for event-race analysis in android apps" In Proceedings of the 18th International Conference on Mobile Systems, Applications, and Services (pp. 466-467). [MobiSys 2020] [Acceptance rate: 17%].

[C.15] Anh Nguyen Duc, Pekka Abrahamsson, Ingrid Sunbø, Elizamary Nascimento, Tayana Conte and **Iftekhar Ahmed**. "A Multiple Case Study of Artificial Intelligent System Development in Industry". In Proceedings of the Evaluation and Assessment in Software Engineering. (pp. 1-10). [EASE2020] [Acceptance rate: 27%].

[C.14] Caius Brindescu, **Iftekhar Ahmed**, Rafael Leano and Anita Sarma. "Planning for Untangling: Predicting the Difficulty of Merge Conflicts". In proceedings of the 42nd International Conference on Software Engineering, (pp. 801-811). [ICSE 2020] [Acceptance rate: 21%].

[C.13] Abdul Aziz. Alshayban, **Iftekhar Ahmed**, and Sam Malek. "Accessibility Issues in Android Apps: State of Affairs, Sentiments, and Ways Forward". ". In proceedings of the 42nd International Conference on Software Engineering (pp. 1323-1334). [ICSE 2020] [Acceptance rate: 21%].

[C.12] Marcia Lima, **Iftekhar Ahmed**, Tayana Conte, Elizamary Nascimento, Edson Oliveira and Bruno Gadelha "Land of Lost Knowledge: An Initial Investigation into Projects Lost Knowledge" . In Proceedings of the 13th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (pp. 139-144). [ESEM 2019] [Acceptance rate: 20%].

[C.11] Elizamary Nascimento, **Iftekhar Ahmed**, Edson de Oliveira, Márcio Piedade Palheta, Igor Steinmacher and Tayana Conte "Understanding Development Process of Machine Learning Systems: Challenges and Solutions" In proceedings of the 13th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (pp. 145-150). [ESEM 2019] [Acceptance rate: 20%].

[C.10] **Iftekhar Ahmed**, Caius Brindescu, Umme Ayda Mannan, Anita Sarma and Carlos Jensen, "An Empirical Examination of Code Smells and Their Impact on Collaborative Work." In *2017 ACM/IEEE International Symposium on Empirical Software Engineering and Measurement* (pp. 58-67). [ESEM 2017]. [Acceptance rate: 19%]

[C.9] **Iftekhar Ahmed**, Darren Forrest and Carlos Jensen. "A Case Study of Motivations for Corporate Contribution to FOSS." In *2017 IEEE Symposium on Visual Languages and Human-Centric Computing* (pp. 223-231). [VL/HCC 2017]. [Acceptance rate: 29%]

[C.8] **Iftekhar Ahmed**, Rahul Gopinath, Caius Brindescu, Alex Groce and Carlos Jensen. "Can Testedness be Effectively Measured?" In *24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering* (pp. 547-558). [FSE 2016]. [Acceptance rate: 20%]

[C.7] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed**, Carlos Jensen and Alex Groce. "On the limits of mutation reduction strategies." In *38th ACM/IEEE International Conference on Software Engineering* (pp. 511-522). [ICSE 2016]. [Acceptance rate: 19%]

[C.6] Umme Ayda Mannan, **Iftekhar Ahmed**, Rana Almurshed, Danny Dig and Carlos Jensen. "Understanding Code Smells in Android Applications." In *IEEE/ACM International Conference on Mobile Software Engineering and Systems* (pp. 225-234). [MOBILESOFT 2016]. [Acceptance rate: 33%]

[C.5] **Iftekhar Ahmed,** Umme Ayda Mannan, Rahul Gopinath, and Carlos Jensen. "An Empirical Study of Design Degradation: How Software Projects Get Worse Over Time." In *9th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement* (pp. 1-10). [ESEM 2015]. [Acceptance rate: 25%]

[C.4] Alex Groce, **Iftekhar Ahmed**, Carlos Jensen and Paul E. McKenney. "How Verified is My Code? Falsification-Driven Verification." In *30th ACM/IEEE International Conference on Automated Software Engineering* (pp. 737-748). [ASE 2015]. [Acceptance rate: 19%]

[C.3] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed,** Carlos Jensen and Alex Groce**.** **"**How Hard Does Mutation Analysis Have to Be, Anyway?" In *26th IEEE International Symposium on Software Reliability Engineering* (pp. 216-227). [ISSRE 2015]. [Acceptance rate: 19%]

[C.2] **Iftekhar Ahmed**, Nitin Mohan and Carlos Jensen. "The Impact of Automatic Crash Reports on Bug Triaging and Development in Mozilla." In *ACM International Symposium on Open Collaboration* (pp. 1-8). [OPENSYM 2014]. [Acceptance rate: 45%]

[C.1] **Iftekhar Ahmed**, Soroush Ghorashi and Carlos Jensen. "An Exploration of Code Quality in FOSS Projects." In *10th IFIP WG 2.13 International Conference on Open Source Systems* (pp. 181-190). Springer Berlin Heidelberg. [OSS 2014]. [Acceptance rate: 25%]

6.3 PEER REVIEWED WORKSHOP PAPERS/SHORT PAPERS

[W.4] Rohith Pudari, Shiyuan Zhou, **Iftekhar Ahmed,** Zhuyun Dai, Shurui Zhou. "Aligning Documentation and Q&A Forum through Constrained Decoding with Weak Supervision" In Proceedings of the IEEE International Conference on Software Maintenance and Evolution (pp. 346-351). [ICSME 2023]

[W.3] Umme Ayda Mannan, **Iftekhar Ahmed** and Anita Sarma. "Towards understanding code readability and its impact on design quality". In Proceedings of the 4th ACM SIGSOFT International Workshop on NLP for Software Engineering (pp. 18-21). [NL4SE 2018]

[W.2] **Iftekhar Ahmed**, Carlos Jensen, Alex Groce and Paul E. McKenney. "Applying Mutation Analysis On Kernel Test Suites: An Experience Report." In 2017 IEEE International Conference on Software Testing, Verification and Validation Workshops (pp. 110-115). [ICSTW 2017].

[W.1] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed**, Carlos Jensen, and Alex Groce. "Measuring Effectiveness of Mutant Sets." In 2016 IEEE Ninth International Conference on Software Testing, Verification and Validation Workshops (pp. 132-141). [ICSTW 2016].

6.4 POSTERS

[P.3] Andrew Truelove, Eduardo Santana de Almeida, **Iftekhar Ahmed**. "We'll Fix It in Post: What Do Bug Fixes in Video Game Update Notes Tell Us?" In IEEE/ACM 43rd International Conference on Software Engineering (pp. 68-69). [ICSE 2021].

[P.2] Yang Yue, **Iftekhar Ahmed**, Yi Wang and David Redmiles "Collaboration in Global Software Development: An Investigation on Research Trends and Evolution" In Proceedings of the 14th International Conference on Global Software Engineering (pp. 68-69). [ICGSE 2019].

[P.1] Cheng Zhou, Sandeep Kaur Kuttal and **Iftekhar Ahmed**. "What Makes a Good Developer? An Empirical Study of Developers' Technical and Social Competencies". In 2018 IEEE Symposium on Visual Languages and Human-Centric Computing (pp. 319-321). [VL/HCC 2018].

6.5 DISSERTATION

Iftekhar Ahmed "Improving the Quality of Software Using Mutation Testing and Fault Prediction" PhD thesis. School of Engineering and Computer Science, Oregon State University, May 2018.

6.6 TECHNICAL REPORTS

[TR.2] Rahul Gopinath, **Iftekhar Ahmed**, Mohammad Amin Alipour, Carlos Jensen, Alex Groce. "Does Choice of Mutation Tool Matter?" *Technical Report, School of Engineering and Computer Science,* Oregon State University, October 2015.

[TR.1] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed**, Carlos Jensen, Alex Groce. "An Empirical Comparison of Mutant Selection Approaches." *Technical Report, School of Engineering and Computer Science, Oregon State University*, April 2014.

7. TEACHING

Assistant Professor, University of California, Irvine	• In4matx115-Software Testing, Analysis, and Quality Assurance	Fall 2018- Fall 2023, Spring 2025
	• In4matx 215- Software Testing and Analysis	Winter 2019
	• SWE225/COMPSCI221- Information Retrieval	Winter 2020-Winter 2023
	• In4matx 43 - Introduction to Software Engineering	Spring 2021- Winter 2023
	• SWE 211 - Software Engineering	Fall 2024
	• Freshman Seminar - Introduction to AI in Software Engineering: Foundations, Applications, and Future Trends	Spring 2025
Instructor Oregon State University	• CS 275- Introduction to Databases (Summer-2012). • CS 361- Software Engineering (Winter-2014 to Spring-2016). • CS 362- Applied Software Engineering (Summer 2015).	09/2014-06/2016
Teaching Assistant Oregon State University	• CS 440- Database Management Systems. • CS 275- Introduction to Databases. • CS 361- Software Engineering. • CS 362- Applied Software Engineering.	09/2011-06/2014

8. SUPERVISED STUDENTS

Current Graduate Students

1. Jiawei Li, Graduate student at University of California, Irvine
2. Qi Hong Chen, Graduate student at University of California, Irvine
3. Jina Chun, Graduate student at University of California, Irvine
4. Hyunjae Suh, Graduate student at University of California, Irvine
5. Eric Huang, Graduate student at University of California, Irvine

Alumni

1. Jiri Gesi
   Graduation date: September 2023
   First employment: Amazon

9. FORMAL PRESENTATIONS

[P.15]	Only diff is Not Enough: Generating Commit Messages Leveraging Reasoning and Action of Large Language Model, (FSE).	July 2024
[P.14]	The Smelly Eight: An Empirical Study on the Prevalence of Code Smells in Quantum Computing, (ICSE).	May 2023
[P.13]	Commit Message Matters: Investigating Impact and Evolution of Commit Message Quality, (ICSE).	May 2023

[P.12]	Improving Productivity Leveraging Bug Reports and Communications, Invited talk at Tadtalk held at eBay Inc. with more than 100 attendees.	April 2023
[P.11]	Broadening Software Quality Assurance: From Improving Machine Learning Models to Making Software Accessible, University of California, Irivne.	March 2023
[P.10]	Using Relative Lines of Code to Guide Automated Test Generation for Python, (ICSE).	May 2021
[P.9]	On the Relationship between Design Discussions and Design Quality: A Case Study of Apache Projects, (FSE).	November 2020
[P.8]	Planning for Untangling: Predicting the Difficulty of Merge Conflicts, (ICSE).	July 2020
[P.7]	Improving Quality of Software Using Bug Proneness Prediction. Institute for Software Research Forum, UC Irvine.	June 2019
[P.6]	Improving Quality of Software in Exploring the Unexplored in Social Software Development Platforms workshop held at UC Irvine.	May 2019
[P.5]	Improving the quality of software using testing and fault prediction. University of Nebraska–Lincoln.	February 2018
[P.4]	Improving the quality of software using testing and fault prediction. DePaul University	January 2018
[P.3]	Improving the quality of software using testing and fault prediction. Utah State University	November 2017
[P.2]	How to apply mutation testing to the RCU for fun and profit: A progress report. *Linux plumbers conference.* Flagship conference of Linux kernel developers with more than 500 attendees.	November 2016
[P.1]	How to apply mutation testing to the RCU for fun and profit. *Linux plumbers conference.* Flagship conference of Linux kernel developers with more than 500 attendees.	September 2015

10. PROFESSIONAL SERVICE

10.1 EDITORIAL BOARDS AND STEERING COMMITTEES

[S.31]	Associate Editor, ACM Transactions on Software Engineering and Methodology (TOSEM)	March 2023-Present
[S.30]	Associate Editor, IEEE Transactions on Reliability (TR)	September 2024-Present
[S.29]	Associate Editor, Empirical Software Engineering Journal (EMSE)	May 2025-Present

10.2 CONFERENCE AND WORKSHOP ORGANIZATION

[S.28]	Co-chair, Student Research Competition, ACM/IEEE International Conference on Software Engineering (ICSE 2026).	April 2026
[S.27]	Program Chair, The 2nd IDE workshop (Cohosted with ICSE)	May 2025
[S.26]	Virtualization Chair, ACM/IEEE International Symposium on the Foundations of Software Engineering (FSE).	June 2025
[S.25]	Co-Organizer, Southern California Software Engineering Symposium (SuCSES'23), UCI.	May 2023
[S.24]	Co-Organizer, Exploring the Unexplored in Social Software Development Platforms, UCI.	May 2019
[S.23]	Virtualization team leader, USA. ACM/IEEE International Conference on Software Engineering (ICSE).	July 2020

10.3 PROGRAM COMMITTEE AND PANEL MEMBERSHIP

[S.22]	Program Committee Member, ACM/IEEE International Conference on Software Engineering (ICSE).	2019, 2020,2023,2024,2025
[S.21]	Program Committee Member, ACM/IEEE International Symposium on the Foundations of Software Engineering (FSE) **[Distinguished Reviewer Award 2025]**.	2023, 2024,2025

[S.20]	Program Committee Member, IEEE/ACM International Conference on Automated Software Engineering (ASE).	2019, 2020,2022,2023, 2024, 2025
[S.19]	Program Committee Member, IEEE/ACM International Symposium on Empirical Software Engineering and Measurement (ESEM).	2023, 2025
[S.18]	Program Committee Member, IEEE/ACM International Conference on Program Comprehension (ICPC) **[Distinguished Reviewer Award]**	2021, 2023, 2024
[S.17]	Program Committee Member, International Conference on Cooperative and Human Aspects of Software Engineering (CHASE) **[Distinguished Reviewer Award 2025]**.	2024, 2025
[S.16]	Program Committee Member, 11th International Conference on Mobile Software Engineering and Systems	2024
[S.15]	Program Committee Member, 16th International Conference on Internetware	2025
[S.14]	Program Committee Member, 1st Workshop on Responsible Software Engineering	2025
[S.13]	Program Committee Member, IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)	2025

10.4 REFEREE AND REVIEWER SERVICE

[S.12]	Reviewer, Journal of Geo-spatial Information Science	2025
[S.11]	Reviewer, Journal of Systems & Software (JSS).	2020-2024
[S.10]	Reviewer, Empirical Software Engineering (EMSE).	2020-2025
[S.9]	Reviewer, IEEE/ACM International Conference on Software Engineering (ICSE)	2018-2025
[S.8]	Reviewer, International Symposium on the Foundations of Software Engineering (FSE)	2025
[S.7]	**Distinguished Reviewer**, Transactions on Software Engineering and Methodology (TOSEM)	2019-2024
[S.6]	Reviewer, IEEE/ACM International Conference on Automated Software Engineering (ASE)	2019-2025
[S.5]	Reviewer, Transactions on Software Engineering (TSE)	2018-2025
[S.4]	Reviewer, IEEE Transactions on Reliability	2017-2025
[S.3]	Reviewer, Computing Journal	2018
[S.2]	Reviewer, Software Testing, Verification and Reliability Journal	2017
[S.1]	Reviewer, IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)	2017

10.5 UNIVERSITY SERVICE

[U.8]	Member, Council on Research, Computing & Libraries (CORCL), UCI	2025-2028
[U.7]	Director, Institute for Software Research (ISR), UCI	2025-Present
[U.6]	Chair, Software Engineering Admissions Committee, Informatics Department, UCI	2024-2025
[U.5]	Chair, Software Engineering Steering Committee, Informatics Department, UCI	2024-2025
[U.4]	Member, Graduate Fellowship Committee, Informatics Department, UCI	2020
[U.3]	Chair, Software Engineering Admissions Committee, Informatics Department, UCI	2020
[U.2]	Member, Software Engineering Admissions Committee, Informatics Department, UCI	2019- 2024
[U.1]	Member, Software Engineering Steering Committee, Informatics Department, UCI	2019, 2021

10. PROFESSIONAL ASSOCIATIONS

- ACM Special Interest Group on Software Engineering (SIGSOFT)
- Institute of Electrical and Electronics Engineers (IEEE)