

Foyzul Hassan
Assistant Professor
Department of Computer & Information Science
University of Michigan-Dearborn

CONTACT INFORMATION	Department of Computer & Information Science University of Michigan-Dearborn 234 CIS 4901 Everygreen Rd. Dearborn, MI 48128 USA	(313) 436-9145 foyzul@umich.edu https://foyzulhassan.github.io/ https://www.linkedin.com/in/foyzulhassan/ H-Index 8 Citations 213
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RESEARCH INTERESTS	My main interest is improving software productivity. Some specific areas of interest to me are: continuous integration, software build processes, script code analysis, program repair and fault localization, software engineering tools for machine learning (SE4ML), and security analysis for development tools.
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EDUCATION	<p>University of Texas at San Antonio, USA</p> <p>PhD in Computer Science , 2020 MSc in Computer Science , 2019</p> <ul style="list-style-type: none"> • Dissertation Topic: Tackling Build Failures in Continuous Integration. • Advisor: Xiaoyin Wang <p>United International University, Bangladesh</p> <p>MSc in Computer Science & Engineering, 2012</p> <ul style="list-style-type: none"> • Dissertation Topic: Neural Network based Context Sensitive Triphone HMM for Bangla ASR. • Advisor: Muhammad Nurul Huda <p>Military Institute of Science and Technology, Bangladesh</p> <p>BSc in Computer Science & Engineering, 2007</p> <ul style="list-style-type: none"> • Dissertation Topic: Learning heuristic estimation for A* search using back propagation neural network. • Advisor: Chowdhury Mofizur Rahman
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PROFESSIONAL EXPERIENCE	<table border="0"> <tr> <td style="padding-right: 20px;">Sep, 2020 - till date</td> <td>Assistant Professor. Department of Computer & Information Science, University of Michigan-Dearborn.</td> </tr> <tr> <td style="padding-right: 20px;">Aug, 2015 - Aug, 2020</td> <td>Research Assistant. Advisor: Xiaoyin Wang, Department of Computer Science, University of Texas at San Antonio.</td> </tr> <tr> <td style="padding-right: 20px;">2019, May - Aug. 2019</td> <td>Research Intern. Microsoft Research, Research in Software Engineering (RiSE) Group. Mentor: Nachi Nagappan and Tom Zimmermann Focus: Web search behavior of software engineers. (Patent pending)</td> </tr> <tr> <td style="padding-right: 20px;">2014 - 2015</td> <td>QA Manager. Kona Software Lab Ltd, Dhaka, Bangladesh.</td> </tr> <tr> <td style="padding-right: 20px;">2008 - 2014</td> <td>QA Lead, QA Engineer. Enosis Solutions, Dhaka, Bangladesh.</td> </tr> </table>	Sep, 2020 - till date	Assistant Professor. Department of Computer & Information Science, University of Michigan-Dearborn.	Aug, 2015 - Aug, 2020	Research Assistant. Advisor: Xiaoyin Wang, Department of Computer Science, University of Texas at San Antonio.	2019, May - Aug. 2019	Research Intern. Microsoft Research, Research in Software Engineering (RiSE) Group. Mentor: Nachi Nagappan and Tom Zimmermann Focus: Web search behavior of software engineers. (Patent pending)	2014 - 2015	QA Manager. Kona Software Lab Ltd, Dhaka, Bangladesh.	2008 - 2014	QA Lead, QA Engineer. Enosis Solutions, Dhaka, Bangladesh.
Sep, 2020 - till date	Assistant Professor. Department of Computer & Information Science, University of Michigan-Dearborn.										
Aug, 2015 - Aug, 2020	Research Assistant. Advisor: Xiaoyin Wang, Department of Computer Science, University of Texas at San Antonio.										
2019, May - Aug. 2019	Research Intern. Microsoft Research, Research in Software Engineering (RiSE) Group. Mentor: Nachi Nagappan and Tom Zimmermann Focus: Web search behavior of software engineers. (Patent pending)										
2014 - 2015	QA Manager. Kona Software Lab Ltd, Dhaka, Bangladesh.										
2008 - 2014	QA Lead, QA Engineer. Enosis Solutions, Dhaka, Bangladesh.										

PUBLICATIONS

Fariha Nusrat, **Foyzul Hassan**, Hao Zhong, Xiaoyin Wang, *How Developers Optimize Virtual Reality Applications: A Study of Optimization Commits in Open Source Unity Projects*, Accepted in 43rd International Conference on Software Engineering (ICSE 2021).

Foyzul Hassan, Chetan Bansal, Nachiappan Nagappan, Thomas Zimmermann, Ahmed Hassan Awadallah, *Exceptions in the Wild: A Large-Scale Study using Search Logs*, in submission at The ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2020).

Lingchao Chen, **Foyzul Hassan**, Xiaoyin Wang, Lingming Zhang, *Taming Behavioral Backward Incompatibilities via Cross-Project Testing and Analysis*, Accepted in 42nd International Conference on Software Engineering (ICSE 2020).

Foyzul Hassan, *Tackling Build Failures in Continuous Integration*, Accepted in International Conference on Automated Software Engineering (ASE 2019), Doctoral Symposium.

Foyzul Hassan, Rodney Rodriguez, Xiaoyin Wang, *RUDSEA: recommending updates of Dockerfiles via software environment analysis*, [New Idea Paper], Proceedings of the 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2018), Pages 796-801.

Foyzul Hassan, Xiaoyin Wang, *HireBuild: an automatic approach to history-driven repair of build scripts*, Proceedings of the 40th International Conference on Software Engineering (ICSE 2018), Pages 1078-1089.

Foyzul Hassan, Shaikh Mostafa, Edmund SL Lam, Xiaoyin Wang, *Automatic building of java projects in software repositories: A study on feasibility and challenges*, Proceedings of the 11th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2017), Pages 38-47.

Foyzul Hassan, Xiaoyin Wang, *Change-aware build prediction model for stall avoidance in continuous integration*, [Short Paper] Proceedings of the 11th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2017), Pages 157-162.

Foyzul Hassan, Xiaoyin Wang, *Mining readme files to support automatic building of java projects in software repositories*, [Poster Track] Proceedings of the 39th International Conference on Software Engineering Companion (ICSE 2017), Pages 277-279.

Foyzul Hassan, Mohammed Rokibul Alam Kotwal, Mohammad Nurul Huda, *Bangla Phonetic Feature Table Construction for Automatic Speech Recognition*, Proceedings of 16th Int'l Conf. Computer and Information Technology (ICCIT 2013), Pages 51-55.

Mohammed Rokibul Alam Kotwal, **Foyzul Hassan**, Mohammad Nurul Huda, *Speech Feature Evaluation for Bangla Automatic Speech Recognition*, [Book Chapter], Technical Challenges and Design Issues in Bangla Language Processing, IGI Global, Pages 169-208.

Foyzul Hassan, Mohammad Saiful Alam Khan, Mohammed Rokibul Alam Kotwal, Mohammad Nurul Huda, *Gender independent Bangla automatic speech recognition*, Proceedings of Int'l Conf. on Informatics, Electronics & Vision (ICIEV 2012), Pages 144-148.

Foyzul Hassan, Mohammed Rokibul Alam Kotwal, Mohammad Nurul Huda, *MLN-based Bangla ASR using context sensitive triphone HMM*, International Journal of Speech Technology(2011), Pages 183-191.

Foyzul Hassan, Mohammed Rokibul Alam Kotwal, Mohammad Mahedi Hasan, Ghulam Muhammad, Mohammad Nurul Huda, *Inhibition/Enhancement Network Based ASR using Multiple DPF Extractors.*, Journal of Multimedia(2011), Pages 395-403.

In Submission/Preparation

Foyzul Hassan, Na Meng, Xiaoyin Wang, *UniLoc: Unified Fault Localization of Continuous Integration Failures*, in submission at the ACM Transactions on Software Engineering and Methodology (TOSEM).

Dhia Elhaq Rzig, **Foyzul Hassan**, Marouane Kessentini, *Title of the paper retracted due to double-blind policy*, in submission for the International Conference on Automated Software Engineering (ASE), 2021.

Emna Ksontini, Marouane Kessentini, Thiago do Nascimento Ferreira, **Foyzul Hassan**, *Title of the paper retracted due to double-blind policy*, in submission for the International Conference on Automated Software Engineering (ASE), 2021.

Patent Submission

Foyzul Hassan, Chetan Bansal, Thomas Michael Josef Zimmermann, Nachiappan Nagappan, Ahmed Awadallah, *Automated Exception Featurization and Search*, US Patent App. 16/659,174

CONFERENCE TALKS

Exceptions in the Wild: A Large-Scale Study using Search Logs, at the ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2020), Virtual Presentation.

Tackling Build Failures in Continuous Integration, at the 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2018), San Diego, USA.

HireBuild: an automatic approach to history-driven repair of build scripts, at the 40th International Conference on Software Engineering (ICSE 2018), Gothenburg, Sweden.

Automatic building of java projects in software repositories: A study on feasibility and challenges, at the 11th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2017), Toronto, Canada.

Change-aware build prediction model for stall avoidance in continuous integration, at the 11th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2017), Toronto, Canada.

An Inhibition/Enhancement network for noise robust ASR, at the 13th Int'l Conf. on Computer and Information Technology (ICCIT 2010), Dhaka, Bangladesh.

OTHER TALKS

Improving the Stability and Efficiency of Continuous Integration, CIS Department Seminar, University of Michigan-Dearborn. (October 2020)

Improving the Stability and Efficiency of Continuous Integration, Invited talk, New Mexico State University. (February 2020)

Improving the Stability and Efficiency of Continuous Integration, Invited talk, University of Maryland, Baltimore County. (February 2020)

Build Prediction Model in Continuous Integration to Avoid Integration Delay, Graduate Research Seminar, University of Texas at San Antonio. (March 2017)

TEACHING & MENTORING EXPERIENCE

Course Taught

Winter	2021	Instructor, CIS 376: Software Engineering II. University of Michigan-Dearborn
Fall	2020	Instructor, CIS 376: Software Engineering II. University of Michigan-Dearborn
Spring	2019	Instructor of Record, CS 3773: Software Engineering. University of Texas at San Antonio (UTSA)
Fall	2018	Instructor of Record, CS 1063: Introduction to Programming I. UTSA.
Fall	2019	Teaching Assistant, Software Engineering, UTSA.
Summer	2018	Teaching Assistant, Software Validation and Quality Assurance, UTSA.
Spring	2018	Teaching Assistant, Software Engineering, UTSA.

Mentoring

University of Michigan-Dearborn

Graduate Students

Dhia Elhaq Rzig, PhD Student, Sept.2020–

Emna Ksontini, PhD Student(Co-Adviser: Dr. Marouane Kessentini), Sept.2021–

Anwar Ghammam, PhD Student(Co-Adviser: Dr. Marouane Kessentini), Sept.2021–

Undergraduate Students

Sherry Robbins, May.2021–

Jason Hogan, (Co-Adviser: Dr. Bruce Maxim), May.2021–

Aaron Salo, (Co-Adviser: Dr. Bruce Maxim), May.2021–

Thesis Committee Member

Rafi Almhana, Intelligent Software Bugs Localization, Triage and Prioritization. (PhD Proposal Date: Oct 8th, 2020)

Jeffrey Yackley, Improving Refactoring Recommendations via Simultaneous Testing, Dependency Analysis, and Fixing Multi-level Quality Issues. (PhD Proposal Date: Oct 9th, 2020)

RESEARCH GRANTS

1. PI, Analyze and Detect Performance Bottlenecks in Virtual Reality Applications,\$3200, UM-Dearborn Undergraduate Research Grant for Summer, 2021.

2. PI, Intelligent Composing, Scheduling and Monitoring of Software Containers for Cyber-Physical Systems, \$15,000, UM-Dearborn DAIR Internal Grant, 2021-22.

HONORS AND AWARDS	2019	NSF Travel Award for ASE, NSF
	2019	UTSA CS Outstanding Achievement Award for Research, UTSA
	2018	NSF Travel Award for ICSE, NSF
	2018	ACM SigSoft CAPS Award for ICSE, ACM (Declined)
	2018	Graduate Student Professional Development Award, UTSA
	2017	ESEM Travel Grant, UTSA
	2017	Alvarez Grad Fellowship, UTSA
	2015	Full Tuition Award, UTSA
	2012	Summa Cum Laude, UIU
	2011	MSCSE Merit Award, UIU
TECHNICAL SKILLS	Programming Languages	Java, C/C++, C#.NET, MFC, Python
	Scripting Languages	Shell Script, Perl
	Mathematical Tools	Matlab, NumPy
	DataBase	Oracle 9i, MySql, MSSQL, Azure Cosmos DB
	Tools & Framework	J2EE 2.0, Spring, Hibernate, Weka, OpenNLP, Pandas, QTP, LoadRunner, JMeter, Selenium, Valgrind, JIRA, Redmine, SVN, Git
SERVICES		<ul style="list-style-type: none"> • PC Member, SANER 2021 • PC Member, SER&IP@ICSE 2021 • Session Chair, Evolution and Reengineering (SANER2021). • Reviewer, IEEE Transactions on Software Engineering (TSE) • Reviewer, International Journal on Software Testing, Verification and Reliability (STVR) • Reviewer, International Journal on Empirical Software Engineering (EMSE) • SubReviewer, Research track, ASE 2019 • SubReviewer, Research track, ISSTA 2019 • Student volunteer, ICSE 2018 • SubReviewer, Research track, SEKE 2017 • SubReviewer, Research track, SEKE 2016
OTHER ACTIVITIES		<p>Department Services</p> <ul style="list-style-type: none"> • MS-SWE Program Committee (September, 2020–) • Research Committee (September, 2020–) • Computing Facilities Committee (September, 2020–)
		<ul style="list-style-type: none"> • President of Bangladesh Student Association(BSA) UTSA during 2016-2017. • Mentor San Antonio Youth Code Jam 2015. • Member, IEEE, ACM, ACM SIGSOFT.