

Foyzul Hassan

CONTACT INFORMATION	Department of Computer Science University of Texas at San Antonio North Paseo Building, 1 UTSA Circle San Antonio, TX 78249 USA Room No.: NPB 2.220	(210)753-2606 foyzul.hassan@my.utsa.edu https://foyzulhassan.github.io/ https://www.linkedin.com/in/foyzulhassan/ H-Index 6 Citations 114
---------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

RESEARCH INTERESTS	My main interest is improving software development productivity. Some specific areas of interest to me are: continuous integration, software build process, script code analysis, program repair and fault localization, software engineering tools for machine learning (SE4ML), and security analysis for development tools.
--------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

EDUCATION	University of Texas at San Antonio PhD Candidate, Computer Science (expected graduation in Summer 2020) <ul style="list-style-type: none">• Dissertation Topic: Tackling Build Failures in Continuous Integration.• Advisor: Xiaoyin Wang United International University MSc in Computer Science & Engineering, 2012 <ul style="list-style-type: none">• Dissertation Topic: Neural Network based Context Sensitive Triphone HMM for Bangla ASR.• Advisor: Muhammad Nurul Huda Military Institute of Science and Technology BSc in Computer Science & Engineering, 2007 <ul style="list-style-type: none">• Dissertation Topic: Learning heuristic estimation for A* search using back propagation neural network.• Advisor: Chowdhury Mofizur Rahman
-----------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

RESEARCH EXPERIENCE	2015 - Till Date Research Assistant. Advisor: Xiaoyin Wang, Department of Computer Science, University of Texas at San Antonio. <ul style="list-style-type: none">• Software Build Automation using Natural Language Processing (NLP) techniques.• Distributed Software Build.• Automatic Software Build Fault Localization and Repair.• Build Time Optimization.• Continuous Integration Performance Optimization.• Software Environment Analysis for Deployment. 2019, May - August 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)
---------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

PUBLICATIONS

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

Foyzul Hassan, Chetan Bansal, Nachiappan Nagappan, Thomas Zimmermann, Ahmed Hassan Awadallah, *Name of the paper redacted to comply with the double-blind review process*, in submission for the 42nd International Conference on Software Engineering

(ICSE 2020).

Foyzul Hassan, Na Meng, Xiaoyin Wang, *Name of the paper redacted to comply with the double-blind review process*, in submission for the 42nd International Conference on Software Engineering (ICSE 2020).

Lingchao Chen, **Foyzul Hassan**, Xiaoyin Wang, Lingming Zhang, *Name of the paper redacted to comply with the double-blind review process*, in submission for the 42nd International Conference on Software Engineering (ICSE 2020).

CONFERENCE
TALKS

Tackling Build Failures in Continuous Integration, at the 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2018), San Diego, USA. (Upcoming on Nov 11, 2019)

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

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

TEACHING &
MENTORING
EXPERIENCE

Spring	2019	Instructor of Record, CS 3773: Software Engineering. Class Size: 28. Prepared class lectures, lab practices, quizzes, assignments, exams, supervised teaching assistants and published student grades.
Fall	2018	Instructor of Record, CS 1063: Introduction to Programming I. Class Size: 75. Prepared class lectures, lab practices, quizzes, assignments, exams, supervised teaching assistants and published student grades.
Fall	2019	Teaching Assistant, Software Engineering.
Summer	2018	Teaching Assistant, Software Validation and Quality Assurance.
Spring	2018	Teaching Assistant, Software Engineering.
Fall	2012	Research Mentor for Masters Research Project on Bangla Speech Recognition. Student Names: M Asfak-Ur-Rahman, KN Babi.
Spring	2012	Research Mentor for Masters Research Project on Bangla Speech Recognition. Student Name: Mohammad Nasiruddin.

EXPERIENCE
WITH
RESEARCH
GRANTS

Assisted in the preparation of proposal for the following research grant:

- NSF CAREER(1846467): Analysis and Repair of Build Scripts for DevOps Software Practice. Duration: 2019-2024. Funded amount:\$492,358

Summer Grant Writing Program at UTSA, 2018

PROFESSIONAL
EXPERIENCE

2014–2015

QA Manager.

Kona Software Lab Ltd, Dhaka, Bangladesh.

- R&D on Cryptographic and EMV specifications for Smart Card.
- Design and develop test bed for PKCS#11 library.
- Designed automatic regression testing framework for KonaPay.
- Established code review process for the development team.
- Define test strategy for cryptographic library and payment systems based on Smart Card and NFC Ecosystem.
- Release and Configuration Management.
- Manage software quality assurance team of 12 members.

2008–2014

QA Lead, QA Engineer.

Enosis Solutions, Dhaka, Bangladesh.

- Review and develop MFC/C++ COM based Plug-in-Application to test Visual-Environment engineering simulation project.
- Develop and maintain testing aid tool such memory analysis tool, Screen capture tool and different application sync tool.
- Design and maintain GUI test automation framework built on Python, Sikuli, RobotFramework and Maven.

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

GRADUATE
COURSEWORK

- | | |
|-----------------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Analysis of Algorithms | <input type="checkbox"/> Advanced Artificial Intelligence |
| <input type="checkbox"/> Introduction to Data Science | <input type="checkbox"/> Software Engineering |
| <input type="checkbox"/> Operating Systems | <input type="checkbox"/> Software Testing and Quality |
| <input type="checkbox"/> Computer Architecture | <input type="checkbox"/> Advanced OOP |
| <input type="checkbox"/> Programming Language & Compilers | <input type="checkbox"/> Speech Recognition |
| <input type="checkbox"/> Machine Learning | |

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

- Reviewer, STVR journal
- 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

- President of Bangladesh Student Association(BSA) UTSA during 2016-2017.
- Mentor San Antonio Youth Code Jam 2015.
- Member, IEEE, ACM, ACM SIGSOFT.

REFERENCES

Xiaoyin Wang (PhD Advisor), Associate Professor,
Department of Computer Science, University of Texas at San Antonio
✉ (xiaoyin.wang@utsa.edu)

Jianwei Niu, Professor,
Department of Computer Science, University of Texas at San Antonio
✉ (jianwei.niu@utsa.edu)

Na Meng, Assistant Professor,
Department of Computer Science, Virginia Tech
✉ (nm8247@cs.vt.edu)

Nachi Nagappan, Partner Researcher,
Microsoft Research
✉ (nachin@microsoft.com)

Tom Zimmermann, Principal Researcher,
Microsoft Research
✉ (tzimmer@microsoft.com)