

SHAMSA ABID

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CAREER OBJECTIVES

I wish to lead research projects aimed at developing cutting-edge tools and technologies for enhancing software developers' productivity. I hope to establish a Software Reuse research lab in Pakistan which will be the first of its kind to support the requirements of the growing software industry of Pakistan. As an academic, I want to teach specialized courses such as Software Reuse, Mining Software Repositories, and Recommender Systems.

ACADEMIC BACKGROUND

Lahore University Of Management Sciences, Lahore. www.lums.edu.pk

Ph.D. CS, PhD in Computer Science, 2021

CGPA: 3.78

Lahore University Of Management Sciences, Lahore. www.lums.edu.pk

MSCS, Major in Computer Science, 2013

CGPA: 3.77 Deans Honor List

Lahore College for Women University, Lahore. www.lcwu.edu.pk

BSCS, Major in Computer Science and engineering, 2000-2004

CGPA: 3.33

ACCEPTED PAPERS/PUBLICATIONS

Abid, S., Shamail, S., Basit, H. A., & Nadi, S. (2021). FACER: An API Usage-based Code-example Recommender for Opportunistic Reuse *Empirical Software Engineering*, 26(6), 1-58.

M. Kamal, A. Abaid, S. Abid, and S. Shamail, FACER-AS: An API Usage-based Code Recommendation Tool for Android Studio, In *2021 IEEE International Conference on Software Maintenance and Evolution (ICSME)* (pp. 609-613). IEEE.

Abid, S. (2019, August). Recommending related functions from API usage-based function clone structures. In *Proceedings of the 2019 27th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering* (pp. 1193-1195).

Abid, S., Javed, S., Naseem, M., Shahid, S., Basit, H. A., & Higo, Y. (2017, February). CodeEase: Harnessing method clone structures for reuse. In *2017 IEEE 11th International Workshop on Software Clones (IWSC)* (pp. 1-7). IEEE.

Abid, S., & Basit, H. A. (2016, March). Towards a structural clone based recommender system. In *2016 IEEE 23rd International Conference on Software Analysis, Evolution, and Reengineering (SANER)* (Vol. 3, pp. 51-52). IEEE.

Abid, S., Qamar, Z., Khan, N., Shayan, M., & Basit, H. A. (2016, December). Retrieving Design Pattern Usage Examples using Domain Matching. In *2016 23rd Asia-Pacific Software Engineering Conference (APSEC)* (pp. 33-40). IEEE.

Abid, S., Abdul Basit, H., & Arshad, N. (2015, June). Reflections on teaching refactoring: A tale of two projects. In *Proceedings of the 2015 ACM Conference on Innovation and Technology in Computer Science Education* (pp. 225-230).

EXPERIENCE

- Research** Organization: **Lahore University of Management Sciences**
From: Sep 2015
To: Oct 2021
Designation: PhD Student Research Assistant
Responsibilities: Performing research in the area of code reuse and recommendation. Developed a code search and recommendation system for software developers using Java, Eclipse IDE and PDE, Lucene, Antlr 4.0, MySQL server, SPMF library and R. Performed empirical evaluation of main system modules.
- JOB** Organization: **Lahore University of Management Sciences**
From: Jan 2021
To: April 2021
Designation: Teaching Assistant for Software Development: Tools & Processes
Responsibilities: Handled four student groups' research projects. Successfully submitted two research papers from two groups, with one paper accepted at an A ranking conference while the other is still under review.
- Organization: **Lahore University of Management Sciences**
From: Jan 2020
To: April 2020
Designation: Teaching Assistant for Software Development: Tools & Processes
Responsibilities: Handled three student groups' research projects.
- Organization: **NUCES FAST**
From: Sep 2018
To: Dec 2018
Designation: External Assistant Professor
Responsibilities: Taught Web Programming using the MEAN stack.
<https://github.com/CS-A-11/CS406WebProgrammingCourseFall2018>
- Organization: **Kinnaird College for Women, Lahore**
From: Jan 2015
To: May 2015
Designation: Visiting Lecturer
Responsibilities:
 - Taught Software Quality Assurance course to undergraduates
 - Mainly responsible for conducting lectures and preparing slides and reading material along with grading
- Organization: **Techlogix Pvt. Ltd.**
From: Aug 2013
To: Oct 2014
Designation: Senior Software Engineer
Responsibilities:
 - Worked as a senior developer and lead along with a team of 4 junior members.
 - Performed team task allocation and management of development activities. Guided the development team to perform the tasks and ensured the adherence to user specifications.
 - Helped the team refactor code and follow conventions and design principles. In charge of conducting code reviews. Helped timely delivery of product.
 - Participation in documentation, code refactoring & reviews.
 - Performed R&D for the storage library for Android synchronization functionality, development of sync utility for master data transfer, SQL server side programming for reports and server side programming for

- management operations and transactional reports.
- Performed requirements analysis and design of complete application and development of collection module. Requirements gathering involved onsite meetings with customer.
- Worked as a senior resident engineer onsite for providing immediate customer support.
- Involved in solving real time issues, maintaining and enhancing the desktop application and Android mobile application with changing requirements or business needs

Organization: **Lahore University of Management Sciences, LUMS**
From: Aug 2012
To: December 2019
Designation: Teaching Assistant for Design Patterns and Refactoring, Software Engineering, Introduction to Computing
Responsibilities: ➤ Mainly responsible for designing and grading quizzes, assignments and managing student projects

Organization: **Lahore University of Management Sciences, LUMS**
From: Jan 2013
To: Jun 2013
Designation: Research Associate: Software Testing
Responsibilities: ➤ Worked as an independent researcher on an innovative technique for fault localization using Java Path Finder.
➤ Areas explored were model checking and symbolic execution using Java Path Finder. Also fault localization techniques were explored.

Organization: **Beaconhouse National University**
From: Aug 2012
To: Dec 2012
Designation: Visiting Lecturer
Responsibilities: ➤ Taught Creating Digital Content to undergraduates
Mainly responsible for conducting lectures and labs and preparing slides and reading material along with grading

Organization: **Lahore University of Management Sciences, LUMS**
From: Jun 2011
To: Aug 2011
Designation: Research Associate: Technology for the Low Literacy Segment
Responsibilities: ➤ Worked for the project Low Literacy Keyboard for Mobile Devices: Enabling Fast and Efficient Text Input. The main idea was to provide a speech enabled keyboard interface in mobile devices to enable semi-literate users to use their voice and minimum keystrokes to type out an SMS without spelling mistakes.
➤ Worked as an independent researcher and did R&D work in the areas of speech recognition, android keyboards and conducting user tests for proving efficacy of the proposed idea.

Organization: **Xavor Pvt. Ltd.**
From: Apr 2007
To: Sep 2007
Designation: Software Engineer
Responsibilities: ➤ Worked on an integration project for a US based Fortune 100 company. The goal was to develop a web service for integrating two different Defect Tracking Systems.
➤ Worked as a developer on a small module of the project to create a web service using the IBM ClearQuest API to expose certain functionality of the underlying ClearQuest databases.
➤ Worked on a web development project for a US based Fortune 100 client

- for their Product Life Cycle Management System.
 - Involved in the database design, screen design and code behind web pages.
 - Worked on a BI solution development project for a US based Fortune 100 client for their Financial system.
 - Worked as a BI developer involved in making reports using SQL Server Reporting Services 2005 under the guidance of my team lead.
- Developed a complete data warehouse for employees' performance analysis. Performed schema design, ETL using SSIS, OLAP using SSAS and finally reporting using SSRS.

RECENT COURSES

Program Analysis, Applied Statistics, Software Reuse, Machine Learning, Human Computer Interaction, Design and Analysis of Algorithms, Design Patterns and Refactoring, Distributed Systems Software Development, Game Design and Development, Advanced Operating Systems, Computer Architecture

DISTINCTIONS

- Certificate for Runner up Poster (Computer Science) SBASSE PhD Colloquium 2016
- Deans Honor List Award (LUMS 2013)
- Outstanding TA Award (Software Engineering LUMS 2013)

TECHNICAL SKILLS

Programming Languages	Java, R, C, C++, C#, VB.Net, ASP.Net, SQL
Database	MySQL, Oracle, Mongo DB, MS SQL Server, SQLite, TeraData, Access
Scripting/Markup Languages	HTML, CSS, XML, JavaScript, XAML, AJAX, Jquery
Development Tools	Eclipse, R Studio, Android Studio, Visual Studio .Net, .Net MVC, NetBeans, RoR, MS SSIS, SSAS, SSRS, Crystal reports, FrontPage, Lint, Cocos2d-x, box2d
Miscellaneous Applications	Erwin, Rational Rose, MS Office family, Visio, Balsamiq Mockups, Latex
Version Control	Git, GitHub, TortoiseGit, TortoiseSVN
Graphics Tools	Photoshop, GIMP, Texture Packer, Physics Editor, Flash MX, CorelDraw
Quality Assurance	Automated Testing using Selenium, JUnit
Project Management	Asana, MS Project

GENERAL SKILLS

- Learning from mistakes
- Taking setbacks in stride and always keep going
- Working efficiently in isolation as well as with team
- Excellent written/oral communication skills in English/Urdu

TRAINING/ CERTIFICATIONS

- Certified: Attended the 2021 IEEE/ACM 43rd International Conference on Software Engineering (ICSE), which was held in virtually from beginning Monday, May 17, 2021 to Friday, June 4 2021.
- Certified: Successfully completed Fire Safety training from LUMS on January 22, 2021
- Certified "Machine Learning Foundations: A case study approach" a MOOC from the University of Washington and offered through Coursera 2016
- Conducted: "Achieving SOLID Design by Refactoring to Patterns", Techlogix conducted for the benefit

of my development team at Techlogix. August 2014

- Attended: “LUMS iOS Development Workshop”, Tintash conducted in LUMS by Mr. Murad Akhter CEO Tintash. Apr 2012
- Attended: “Teacher Training Programme”, Teacher Training Wing Education Branch, DHA Lahore Mar 2011 – Jun 2011
- Certified: “uBuntu Linux User”, FOSSAC 2005 PUCIT
- Certified: “French Language Level 1 course”, Institute of Modern Languages, Lahore. 2004
- Attended: “Workshop on Enhancing Human Productivity and Communication Skills”, Lahore Chamber of Commerce and Industry.
- Attended: “Workshop on Website Design, Development and Advertising”, BrainNet Ltd.

VOLUNTEER WORK

- Part of Shadow Program Committee for MSR 2021 conference, reviewed two papers
- Reviewed two papers for Journal of Behavior and Information Technology in 2020 and 2021

HOBBIES

- Reading books
- Watching movies and dramas
- Swimming
- Working out in the gym
- Cooking
- Baking
- Calligraphy
- Photography
- Tiktok video editing
- Leisure driving
- Hiking

REFERENCES

Dr Shafay Shamail, Professor, LUMS, Lahore

Dr Hamid Abdul Basit, Associate Professor, Prince Sultan University, Riyadh

Dr Sarah Nadi, Assistant Professor, University of Alberta, Canada