

Mujahid Khan

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EDUCATION

Texas State University

August 2018 - May 2023

PhD Computer Sciences, Software Systems Track

Relevant Courses : Advanced Software Engineering, Software Quality, Advanced Data Mining

Lahore University of Management Sciences

August 2014 – May 2018

BS Computer Science

Relevant Courses: Program Analysis, Software Engineering, Advanced Programming, Data Structures, Algorithms, High Performance Computing, Network Security

EXPERIENCE

Texas State University

Sep 2018 - Present

Doctoral Instructional Assistant – Advanced Computer Security

- Assisted students on multiple projects on basic linux environment
- Demonstrated how to implement firewall rules, buffer overflow attacks and encryption/decryption

Lahore University of Management Sciences

Jan 2017 – May 2017, Jan 2018 – May 2018

Teaching Assistant – Artificial Intelligence and Advanced Programming

- Conducted tutorials on neural networks
- Designed and evaluated assignments in Haskell for functional programming paradigm

Educative Inc.

Jul 2017 – Dec 2017

Technical Author

- Worked on an interactive programming course for beginners
- Wrote challenges with increasing level of difficulty in Python and Javascript

Program Analysis Group at LUMS

Jan 2017 – May 2017

Research Intern

- Worked on Java Pathfinder to understand Model Checking
- Wrote sample Listeners and Choice Generators
- Reproduced the results of a previous research paper

Computational Genomics and Systems Biology Lab at LUMS

May 2016 – Aug 2016

Research Intern

- Improved existing version of [HANDS2](#) by performing runtime and memory optimizations
- Added support for [BAM](#) files in addition to previously catered [SAM](#) files

SKILLS

Technologies: LLVM, JPF, z3, React, Selenium, Android Studio, Unity3d, Git, Jira, Slack

Programming Languages: C++, Java, Python, Javascript, Golang, Haskell, Bash

PROJECTS

OptAIMizer: An Incremental Checkpointing Approach

- Worked on static analysis and instrumentation of code written for IoT devices in Contiki
- Used incremental checkpointing to reduce the amount of memory required for saving states
- Implemented the whole framework using LLVM and Clang

Regression Test Selection using Impact Analysis of Android API Changes

- Implemented a novel approach for regression test selection of android applications
- Determined which test cases needed to be re-run after an API update instead of the traditional [re-test all](#) approach

Isolated Testing of Frontend Javascript

- Facilitated isolated testing of frontend javascript using Antlr4 and Python
- Performed code instrumentation to delete http.get calls and recreate communicated object

HONOURS AND AWARDS

Doctoral Assistantship/Scholarship from department of CS @ TXST for the first three years of PhD

Runners-up Mindsweeper'18 in a programming competition held at FCCU, Lahore

National Outreach Program Scholarship for 8 semesters 2014-2018

EXTRA-CURRICULAR

Director IT, E-sports @ LUMS, 2016

- Managed the IT department of the said gaming society
- Lead and held gaming tournaments at LUMS catering CS:GO, Dota 2, Tekken and FIFA

Streamer

- Have great passion for gaming apart from Computer Sciences
- Have occasionally streamed *Apex Legends*, *Dota 2* on Twitch