

ASIM IKRAM

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in Asim Ikram

📍 Islamabad, Pakistan

PROFESSIONAL EXPERIENCE

Graduate Research Assistant

Washington University in Saint Louis

📅 Aug 2021 – Sep 2022

📍 Saint Louis, USA

- Implemented various strategies to improve the performance of the Cilk runtime written in C and C++
- Wrote code to enable fine-grained instrumentation in the runtime.
- Wrote Python scripts to plot interactive graphs using the instrumentation data. Added the ability to select a subsection of the data to ease rendering of the graphs
- **Tools and Technologies:** C++, C, Python, Linux

Research Associate (Mid-Level Software Developer)

National Center for Cyber Security

📅 Mar 2020 – July 2021

📍 Islamabad, Pakistan

- Designed and implemented code architecture
- Performed analysis on the extracted data and added interactive plots to show the analysis
- Set up code integration and deployment. Wrote an installer package (.deb) for Linux based systems using debconf.
- Coordinated tasks between group members using JIRA and set up integrations to the repository for easier task tracking, management and time-saving.
- Conducted technical interviews and helped new members get on-board with the project.
- **Tools and Technologies:** Python, Flask, Javascript/JQuery, Linux, debconf, JIRA, Bitbucket

Research Assistant (Junior Software Developer)

National Center for Cyber Security

📅 Mar 2019 – Mar 2020

📍 Islamabad, Pakistan

- Developed a software for Android forensics
- Wrote backend code to extract an image of the device and parse data from the extracted image and frontend code to display the extracted and processed data
- Used REST APIs for communication between the backend and frontend and ORM to communicate to the database
- **Tools and Technologies:** Python, Flask, Javascript, JQuery, Linux

Software Design Engineer

Xflow Research Pvt. Ltd.

📅 Jul 2018 – Mar 2019

📍 Islamabad, Pakistan

- **Virtual BNG:** Studied and implemented the PPPOE and LCP protocols. Also tested the protocols using the rp-pppoe client. Both versions of the code were written such that they could be easily extended.
- **Tools and Technologies:** Golang, Linux
- **Virtual BRAS:** Implemented a central command line interface to manage virtual machines. Wrote a deployment script to automatically install the tool on the required system. Helped the testing team by running the provided unit test cases as well as reporting and fixing bugs.
- **Tools and Technologies:** Python, Bash, Linux

EDUCATION

Master of Computer Science

CGPA: 3.77/4.00 (Gold Medal)

National University of Computer and Emerging Sciences

📅 Aug 2016 – Jun 2018

📍 Islamabad, Pakistan

Bachelor of Computer Science

CGPA: 3.30/4.00

National University of Computer and Emerging Sciences

📅 Aug 2012 – Jun 2016

📍 Islamabad, Pakistan

PUBLICATIONS

Authorization Policies Specification and Consistency Management within Multi-Cloud Environments – NordSec 2018

AMclr - An Improved Ant-Miner to Extract Comprehensible and Diverse Classification Rules – GECCO 2019

SEMESTER PROJECTS

CodePlay

- Wrote a tool in JAVA that translated JAVA code to C# and vice-versa. The mapping could be specified via a config file.
- **Tools and Technologies:** Java, C#.

GPU Cache Bypassing

- Wrote Java code to automatically modify NVIDIA PTX code to bypass cache store instructions that resulted in less cache misses.
- **Tools and Technologies:** Java, Nvidia Visual Profiler.

Distributed Password Cracker

- Implemented a distributed version of a brute force password cracker in Go.
- **Tools and Technologies:** Go.

DNS Spoofing

- Implemented a DNS spoofer in Python that redirected the user to a fake website to steal login credentials.
- **Tools and Technologies:** Python, Scapy, Bind9.

SKILLS

Python

Flask

C/C++

Javascript/JQuery

Git/Github/Bitbucket

Linux

Latex

AWARDS

- Gold Medalist in MS (CS)
- Multiple time Dean's list award holder