# Muhammad Usama

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| Blog: | SMUsamaShah.github.io |
| Location: | Rawalpindi |

4 years of experience as a Software Developer in languages including C/C++, C#, Java and JavaScript. Web development experience in Java Spring, ASP.net and PHP. I mostly work on Windows and sometimes on Linux distributions. I am very good at debugging and like solving problems. Can relocate or remote.

## Work Experience

### Application Developer – Teradata
*JAN 2018 – PRESENT*
- CICD pipeline development
- POCs for various clients and projects.
- Deployment, configuration and integration of tools on Cloud on AWS and Linux.
- Docker, Jenkins, Icinga 2, ELK, Elasticsearch, Logstash, Kibana, ServiceNow

*Python, Groovy, Java, NodeJS, C++, CPPUNIT*

### Software Engineer – Gorillabox
*AUG 2015 – DEC 2017*
Cloud Gaming platform - G-Loader

Increase the user base of a game by allowing users to play it before it's fully downloaded and installed. Increased the conversion rate by more than 30% leading to decrease in acquisition costs.
- Added new features, bug fixes and performance improvements in G-Loader video streamer.
- Integrated many games including *The Elder Scrolls Online, World of Airplanes, Dragon Prophet*.
- Integrated and support of Fiesta Online with G-Loader for release as the first game.
- Did lots of Reverse Engineering and DLL Injection, API Hooking, input hooking to add more games.
- Implemented H264, H265 Hardware Encoder for DirectX 9(Ex), DirectX 10 based games.
- Implemented Hardware Encoder in Google Chrome for WebRTC for in browser gaming.
- Added Multi-Streaming support as concurrent game instances on same machine.
- Wrote generic desktop-based streaming for easier faster integration of any game.
- Updates and fixes in Android client with JNI.
- Architecture design of backend web server.
- Java/Spring based Management Server to manage streams.
- Wrote analytics with activity logging to check conversions of thousands of users.
- Citrix XenServer, License Servers, VMs management and Git repo management.
- Trained and mentored new developers.

*C/C++, C#, Java Spring, MySQL, Hibernate, Android, JNI, Win32, Windows API, AWS EC2 API, Windows Services, SDL2, CURL, H264 and H265 Hardware Encoders, WebRTC Native, FFmpeg, Nvidia NVENC, NvIFR, NvFBC, DirectX 9 and DirectX10, API Monitoring, API Hooking, DLL Injection, EasyHook, Live555, Citrix XenServer and XenCenter, Git*

### Research Associate – SEECS, NUST
*DEC 2012 – JUN 2014*
DSpace
- Delivered successfully for PASTIC and SEECS.
- Contributed back to its original open source repository by publishing bug fixes.

*Java, JSP, JavaScript, Git, PostgreSQL.*

### Teaching Assistant – SNS, NUST
*MAR 2013 – MAY 2013*
- Teaching Assistant of bachelors' Computer Programming course for Java.

### PHP Intern - SASD International, Lahore
*FEB 2011 – APR 2011*
- Created WordPress themes from provided HTML/CSS templates.

*Core PHP, WordPress, Joomla.*

## Skills

- C/C++, Java, C# .Net, JavaScript, Python, PHP
- Spring Hibernate, Android, JNI, Windows API, Win32, Live555, DirectX9, DirectX10, SDL, SDL2, HTML5 Canvas, jQuery, Angular JS, DLL Injection, API Hooking, Git, WebRTC, Jenkins, Docker, AWS
- My SQL, MS SQL Server, MS Access, PostgreSQL, MS Visual Studio, NetBeans, Eclipse, Matlab

## Projects:

**Radiological Management System – [ASP.NET MVC5, jQuery, AngularJS]** Web app to manage DICOM files (studies) in different hospital centers. Bulk file upload. Study review workflow. Reports generation.

**Scientific Workflow System – [Java, Jade, Swing]** Workflow automation and UI generation. Thesis POC.

**ASA Film Crew – [JavaScript, PHP, PhoneGap, Puship]** Create booking requests. Push notifications.

**Energy Monitor NUST – [C#, MS SQL Server, MS Charts & Reports]** Dashboard for power generators with stats, visualization. Reports. SMS communication.

**Recipe Manager – [C#, MS Access]** Keep record of sales and stock of recipes and their ingredients.

**Cricket Score Board – [C# WinForms, MS SQL Server 2008]** Live and offline cricket scores, team and player profiles from XML feeds. Graphical teams and players comparison, notes, schedules. FYP.

## Hobby Projects:

**Chip-8 Emulator –** GitHub **[JavaScript, Canvas]** emulator to play chip-8 games and programs in browser.

**Visualize Sorting Algorithms + Sound –** GitHub **[JavaScript, Canvas]** sorting algorithms side by side.

**Space Shooter Game –** Play Store **[GML, Game Maker Studio 2]** a fun little space shooter game.

**Procedural Trees –** GitHub **[JavaScript, Canvas]** generate fractal-based trees from given seed.

**FFmpeg Video Player –** GitHub **[C#, CLI, C++, WinForms]** video stream player to mark frames.

**Multi-Screen Mouse Snap –** GitHub **[C++, Win32]** avoid accidental mouse movements between displays.

**Column Reader –** GitHub **[C#, Win Forms]** offline reading. No DB. Support more with DLLs. Bulk Download.

**Opera Friendly Clock –** Opera Addons **[JavaScript, Opera extension API]** speed dial extension for Opera.

**Bulk Delete Delicious tags –** Source Forge **[JavaScript]** to remove useless Del.icio.us tags.

## Education

| MSCS | 2011 – 2015 | NUST |
| BSCS | 2005 – 2010 | Virtual University of Pakistan |

**MS Thesis:** *"Multi Agent based Virtual Research Assistant for Scientific Workflows"*. Dr. Peter Bloodsworth

## Certifications and achievements

1. Certified Professional Scrum Master Level I – Nov 2018
2. Certified Teradata Database Associate – Dec 2018
3. AWS Certified Cloud Practitioner – Dec 2018
4. Oracle Certified Associate, Java SE 8 Programmer I – Jan 2019
5. Certified Associate in Python Programming – Jan 2019
6. Certified Blockchain Expert – V2 – Jan 2019
7. AWS Certified Developer Associate – Feb 2019
8. AWS Certified Architect Associate – Mar 2019

Hacktoberfest 2018 (GitHub, DigitalOcean, Twilio) participant

## Personal Strengths and Interests

Blogging. Some open source stuff. Sketching and painting using pens, brushes or code. Video games.
Explore how things work in detail. I work hard to solve problems and love doing experiments.
Read IT news, including AI and robotics, science and some mathematics.