+91 9920075939   **Ritesh Talreja**   **riteshtch@gmail.com**
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- **Work Experience**: **Embedded Software Engineer @ Unify IoT Technologies [Jun 2018 - May 2019]**
  - Researched into Blockchain usage for IoT by creating a PoC (Proof of Concept) to eliminate cloud middleman using IPFS (Inter Planetary File System)
  - Smart WiFi Socket (ESP8266 micro-controller, NodeMCU Lua firmware) discoverable over mDNS with features such as Timers, Calendar Sync, Mobile Charging Auto-Off, Easy Setup, Travel Mode
  - Smart Lid: Water Tank Level Switch to auto-turn on/off pump based on current tank Level (AVR, Ultrasonic sensor & HC06 Bluetooth)
  - Developed corresponding Android and GAE (Google App Engine) Python Flask REST API for remote monitoring & control

- **Work Experience**: **Technology Analyst, Software Engineer @ JP Morgan Chase[Jul 2015 -May 2018]**
  - Wrote code to automate data flow, regulatory report generation & submission to financial regulators
  - Carried out every phase of SDLC: SBE (Spec by Example)>Design>Dev>SIT>UAT>Prod & Monitor.
  - Collaborated with global teams of business users, compliance, central bank & regulator representatives from: India (SEBI, RBI), Japan (BoJ), Singapore (MAS), USA (SEC), UK (BoE)
  - Code consumed data from various upstream systems across diverse financial products of Capital (Stocks & Bonds) & Commodity Markets, Derivatives Markets, Futures & Forwards, Forex, Swaps
  - Made regular enhancements in existing frameworks to support new functionality
  - Was actively involved & contributed significantly in tech forums (especially blockchain)
  - Force for Good (JPMC's Social welfare program): Developed software for Pratham NGO to manage its education centres for underprivileged children & gain valuable insights using Analytics & Business Intelligence. We migrated existing Salesforce OLTP DB to Azure using Pentaho ETL. We developed auto-updating multidimensional OLAP cube reports & charts in PowerBI to gain insights & support decision making. Users could perform functions on them such as aggregation, slicing, dicing, Roll Up, drill down, Pivoting etc.

- **Education**

Master of Science, Computer Science	USC	2019-Present	Ongoing
Bachelors in Computer Engineering	Mumbai University	2012-2015	75.17%
Diploma in Computer Technology	MSBTE	2009-2012	84.24%
Matriculation	ICSE	2009	91.14%

- **394, 000 (& growing) number of people** reached on Stack Overflow:
  https://stackoverflow.com/users/1091784/ritesht93

- **Technical Skills (Software Development & Embedded Hobbyist)**

Java (EE & SE), Spring MVC, Hibernate ORM	SCM, Build Tools: Jenkins, Maven, Git, TDD Fitnesse	Web Tech: HTML, jQuery, Bootstrap, JS, PHP, LAMP, selenium	Lua, C, Arduino, NodeMCU, AVR
Python & Raspberry Pi	DB: MySQL, MongoDB, Oracle	Pentaho ETL	Android App Development

- **Published Paper (April-2014)** *"Emergence in Web-based Botnets (Targeting Application Layer)"*, International Journal of Engineering & Research (IJERT, ESRSA Publications) Journal Vol 3, Issue 4. ISSN: 2278-0181

- **Achievements**
  - **JP Morgan Chase Tech Savvy award** (2015)
  - **Runner up at JPMC Code for Good** Hackathon (12, 13 July, 2014)
  - **Ranked 1st in all 3 years of diploma in Computer Technology branch**
  - **Junior [2012-2013] & Senior [2013-2014] Technical Officer @ Computer Society of India (CSI) council member** designations [Managed & conducted society events both technical & non-technical, Presented various seminars in collaboration with IIT Mumbai (IIT Bombay) (Python, etc.) & solely under CSI-VESIT]

- **Major Projects Developed**

#	Project	Tech Stack	Developed under/for	Year
1	PXE N/W Boot Server	➢ Python, Raspberrry Pi Cluster	Final Year Project	B.E (2015)

A number of Raspberry Pi's were "known" to each over LAN with 1 of them hosting a PXE (Preboot eXecution Environment) server with ability to boot clients off local/internet HTTP server & local TFTP server. IP configuration done using local DHCP server OR proxy DHCP (Eg: WiFi router) by forwarding DHCP DORA packets.				
2	Experimental DDoS Botnet	➤ Bot: C#.NET ➤ CNC Server: Dynamic DNS, PHP, MySQL, Android App	Seminar Curriculum Course	B.E (2014)
Botnet is an army of compromised hosts with background software bots which blindly follow commands by central Command & Control (CNC) Server. My botnet initiated Distributed Denial of Service (DDoS) attack on a victim server using different methods such as PingFlood, TCP SYN Flood etc.				
3	Cricomania [Cricket Player Auction Tracking]	➤ Android (Java, XML) ➤ Java (Socket Programming over Wi-Fi) ➤ PHP + MySQL	Computer Society of India	B.E (2014)
A complete package of 5 applications made exclusively for Cricomania event of CSI-VESIT. Components include: • Android App & Server over Wi-Fi to track scores of events played • Auction handler (which team bought which player) & who won based on total brand value of players				
4	Automated Attendance Monitoring System	➤ Android (Java, XML) ➤ Java Sockets & DB Connection Pooling ➤ PHP + MySQL	Exclusive Scholarship Program	B.E (2014)
Android App automating manual paper-based work of taking attendance for my Undergrad University. Architecture is independent of time table, shifts, etc therefore would be applicable for any university.				
5	Computer Builder Website	➤ PHP + MySQL ➤ HTML	Web Engineering Course	B.E (2014)
Website providing users guided tours to select their own high-end computer keeping in mind compatibility & performance.				
6	CSI Experience Android App	➤ Android (Java, XML) Client ➤ Web based Server (RSS XML for notifications)	Computer Society of India	B.E (2013)
Developed an android application for CSI VESIT, features include extensive feed parsing and caching, RSS notifications. It is being extensively used by CSI members to get information regarding day to day events, their schedule, descriptions & online registration.				
7	Wireless MCQ Quiz App (Wi-Fi Sockets)	➤ Android (Java, XML) Client ➤ Java Multithreaded Server (Swing, XML/EXI)	Computer Society of India	B.E (2013)
Earlier without this app, elimination round for CSI events used to be paper based and results would come out the next day after manually checking the papers.				
8	Sentiment Analysis using Opinion Mining.	➤ ASP.NET (C#), SQL Server (Supervised Machine Learning)	Internship (Sara Software Labs)	Summer Vacations (2013)
8 movie review sites = 4 Training Dataset + 4 Test Dataset. Web App crawled (fixed depth) the training dataset, & for each movie, its name, details, review & user comments were scraped out using Html Agility Pack's DOM based Library. These were tokenized & matched against a DB of words (adjectives majorly) to produce scores (+ve, -ve & neutral). Score obtained after scraping test dataset & scores calculated previously using training data set were averaged to get final rating out of 5.				
9	RecordShot Audio & Screen Recorder	➤ Android (Java, XML) [Rooted & Non-Rooted]	Industrial Project Development Course	Diploma Semester 6 (2012)
Rooted version captures frame buffer which needs root/superuser permissions (Linux-based Android OS). Non-rooted version loads the background service off the PC to mobile via an automated BASH/BATCH/PS script.				
10	Xquisite (Game Zone)	➤ C++ (BGI)	OOP Course	Diploma Semester 3 (2010)
A simple collection of interactive GUI mouse based games (Bingo, Xn0, Bingo, Pac man)				

🔸 **Extra-curricular**
- Technical Paper Presentation (Mobile networks) during Diploma in Tech-Fest Anvesh (2012)
- Secured 1st place in Tech-it-away Tech Quiz & Bluff-master organized by IEEE (2012)