

# Krishnakumar Muthukrishnan

165, Niagara Falls Blvd, Buffalo, New York-14226, USA

+1 (716) 903 2874 

[kmuthukr@buffalo.edu](mailto:kmuthukr@buffalo.edu) 

Krishnakumar Muthukrishnan 

[Portfolio Website](#) 

## Summary:

A seasoned developer with 5+ years of experience in C, C++, Python & Shell scripts on UNIX, and Linux platforms. Fully conversant with Software Development Life Cycle (SDLC). Well versed with Agile and Waterfall methodologies. In-depth knowledge with Object Oriented Programming and design techniques. Demonstrated ability to communicate and work with senior management, associates, and customers. Strong problem solving and technical skills coupled with innovative mindset. (\*\*[Click here for detailed profile](#))

## Experience:

<b>2019-07 – 2021-05</b> <b>Information Technology Analyst</b>	Tata Consultancy Services, Chennai, India <b>Project:</b> - Alcatel-Lucent Enterprise (ALE)
<ul style="list-style-type: none"><li>• Good understanding of OSI Model, TCP/IP protocol suite (IP, ARP, TCP, UDP, SMTP, FTP and TFTP). And IP Telephony services.</li><li>• Have used POCO-C++ class libraries and frameworks for building network- and internet-based applications.</li><li>• Basic knowledge and experience in Oracle 10g/11g database programming using SQL, PL/SQL.</li><li>• Used Oracle C++ Call Interface (OCCI) to use the object-oriented features, native classes, and methods of the C++ programming language to access the Oracle database,</li><li>• Developed Python APIs to dump the array structures in the processor at the failure point for debugging.</li><li>• Implemented dev automation in Python using Docker, Jenkins CI, and test automation tools</li><li>• Worked in AWS environment, instrumental in utilizing Computer Services (EC2, ELB), Storage services (S3, Glacier, Block storage, Lifecycle Management Policies) Cloud Formation (JSON templates), Elastic Beanstalk, Lambda, VPC, RDS, Trusted Advisor and cloud watch.</li><li>• Scripting and (Linux) machine provisioning using bash and the Python AWS-SDK.</li><li>• Minimal exposure into 'Make' file creation.</li></ul>	
<b>2015-06 - 2019-06</b> <b>Software Engineer</b>	Tata Consultancy Services, Chennai, India <b>Project:</b> - Alcatel-Lucent Enterprise (ALE)
<ul style="list-style-type: none"><li>• Excellent experience in coordinating and implementing the activities planned with the Onsite/Offshore Development teams and Delivering within the stipulated period.</li><li>• Utilized C++ templates, OO Design patterns for PABX features development.</li><li>• Implemented new features in the existing system using modern programming practices such as object-oriented design patterns and TDD/BDD principles.</li><li>• Expertise in designing, developing middleware components and applications for software in C/C++ using data structures, IPC (TCP/IP socket programming) and design patterns.</li><li>• Experience in developing C++ services using web services architecture REST and XML.</li><li>• Utilized C++ STL, and thread pool to achieve optimal design efficiency.</li><li>• Reduced memory usage through improved coding practices and algorithm optimization.</li><li>• Worked with several python packages like NumPy, SciPy, pytables etc.</li><li>• Used Python extensively for data analysis tasks, to parse XML documents and basic database operations.</li><li>• Developed and designed backend modules using Python, Django Web Framework.</li><li>• Used CI/CD tools Jenkins, Git/Gitlab, Jira and Docker registry/daemon for configuration management and automation.</li><li>• Created and maintained automated testing scripts for each project, ensuring code quality before deployment.</li></ul>	

## Education:

**Degree** - Master of Science – Computer Science & Engineering.

**Location** - State University of New York – Buffalo, USA.

- Graduation - 02/2023
- CGPA - 3.333
- Course Work - (\*\*[click here for complete list](#))

**Degree** – Bachelor of Technology – Information Technology.

**Location** - Thiagarajar College of Engineering, Anna University, India.

- Graduation – 06/2015
- CGPA - 3.33

## Skills (\*\*[click here for detailed view](#))

<b>Proficient in Development Languages</b>	: C, C++, ReactJS/React-Native, HTML, CSS
<b>Efficient and effective in using Scripting languages</b>	: Python, JavaScript, GNU Bash
<b>Adept in database skills</b>	: SQL, Oracle, Firebase
<b>Familiar with</b>	: Java, Solidity
<b>Protocols</b>	: TCP/IP, UDP, HTTPS, SNMP, DHCP, RTP, SSL/TLS, DTLS.
<b>Framework / Libraries /API</b>	: OpenMP, OpenMPI, PySpark, Pandas, NumPy, POCO, MVC, STL, BOOST, Django, OCCI, REST
<b>Platforms &amp; Virtualization</b>	: Windows, Unix, Linux, VMware, KVM
<b>Tools</b>	: VScode, Remix, GitHub, Mercurial, Jenkins, PuTTY, WinSCP, Wireshark, Android studio, JIRA, VMware Esxi, KVM Manager, Klocwork Analyzer, Docker, AWS, gdb, valgrind
<b>Leadership</b>	: Lead multiple small scale development activities over the span of 5+ years.
<b>Misc.</b>	: Basic switch & Router configurations, Server maintenance from Bare Metal state, IP routing table maintenance.

## Other diverse Projects: (\*\*[click here for elaborate view](#))

- (TCS-ALE) DTLS based End-to-End Security Architecture.
- (TCS-ALE) Cloud migration of legacy PABX system.
- (TCS-ALE) IPv4<==>IPv6 signaling translator.
- (UB-CSE) Server-client webchat application.
- (UB-CSE) LUCID Vending - Mobile Application. (Android & IOS)
- (UB-CSE) Minor Academic Projects. – AI/ML, High Performance Computing, Networks.