SONU GUPTA

sonugupta4636@outlook.com | 198 Main Street, Binghamton, NY | +1 (607) 297-0795
LinkedIn | GitHub

PROFESSIONAL SUMMARY

- 4 years of professional experience in software development using C and C++ with agile and scrum methodology

EDUCATION

Master of Science in Computer Science — ***Expected May 2020***
Binghamton University, State University of New York — ***GPA: 3.85 / 4.00***

Bachelor of Engineering in Computer Science — ***August 2010 - May 2014***
University of Pune, India — ***GPA: 3.70 / 4.00***

PROFESSIONAL EXPERIENCE

Research Assistant — ***Feb 2019 - Now***
C, C++, Bash, Python, PHP, Cloud Computing

- Working on 'Dynamic server and data center Capacity Provisioner' (DCP) that dynamically tracks and matches workload demands to realize improved energy proportionality and energy savings

Senior Software Engineer | Johnson Controls | Pune, India — ***March 2017 - July 2018***
C, C++, Python, BACnet

- Part of the security team responsible for C11 Annex K Library development, which helped in mitigating 'Buffer Overflow' security attacks by 90%
- Worked in a test-driven development model using the 'Unity' with 'CMock' frameworks
- Designed and developed 'BACnet Decoder' UI tool which helped for commissioning and analyzing network packets
- Wrote the build scripts for Linux and Windows platform to automate various tasks

Full Stack Developer | Quick Heal Technologies Ltd | Pune, India — ***July 2014 – March 2017***
VC++, STL, Win32 SDK, Socket Programming

- Developed a proof of concept for 'Extensive Network Querying and Reporting' tool which improved the server performance by more than 300%
- Developed the Network Access Protection (NAP) platform for protecting access to private networks
- Designed and developed the GUI for a standalone product 'PCTuner utility' using C++
- Implemented various tools using Win32 SDK for internal purpose which was mainly used by QA team for testing
- Managed Product Localization and delivered localized product builds as per release plan to QA team

ACADEMIC PROJECTS

Parallel KNN for high dimensions
C++, STL, Multithreading

Implemented a parallel k-d tree for solving nearest neighbor's problem in high dimensional space using POSIX Threads

Distributed, Fault-Tolerant, Highly Available NoSQL Database
Python, Google protobuf

Designed and developed an eventually-consistent distributed NoSQL key-value database like Cassandra which implements read repair and hinted handoff mechanisms

PERSONAL PROJECTS

OpenSSL X509 Certificate Programming Tool
C++ 11, Boost, STL

Developed a utility tool to generate X.509 certificates and signing requests, based on OpenSSL

IoT based Home Automation System
Embedded C, MQTT, Arduino ESP8266 Library, Node.js

Developed a Wireless Home Automation System which uses mobile devices to control basic home functions and features automatically through the internet from anywhere around the world

TOOLS & TECHNOLOGIES

GDB, Valgrind, CMake, Git, Jenkins, Bash Scripting, WinDbg, Doxygen, Unity, GTest, MFC, COM, Apache Thrift