

# Vibhav Yawalkar

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## EDUCATION:

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### University at Buffalo, The State University of New York

GPA: 3.9

Master of Science in Computer Science Engineering

Feb 2021 (Expected)

- **Courses:** Distributed Systems, Operating Systems, Computer Security, Networking, Algorithms

### University of Pune, Pune Institute of Computer Technology, India

Bachelor of Engineering in Computer Engineering

Jul 2015

## ENGINEERING EXPERIENCE:

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### VERITAS Technologies LLC

#### Software Engineer

Jul 2017 – Aug 2019 (2yrs 1 month)

Pune Area, India

- Worked on enabling Third Party Certification Authority (CA) and Certificate Revocation List(CRLs) support in Veritas's flagship Backup and Recovery product 'NetBackup'.
- Designed and implemented an algorithm for peer CRL check during the Data Backup and Recovery workflow.
- Worked on code refactoring and fixing potential security vulnerabilities in Veritas Certification Authority(CA).
- Developed POC (Proof of Concept) to support Online Certificate Status Protocol (OCSP) and Multi Factor Authentication in the NetBackup Authentication Service.

#### Associate Software Engineer

Feb 2016 – Jun 2017 (1yr 5 months)

Pune Area, India

- Worked on design and development of an infrastructure for generation and deployment of X.509 certificates in Veritas NetBackup.
- Implemented a Proxy-based protocol to secure the communication between the CORBA (Common Object Broker Architecture) services in NetBackup using OpenSSL crypto library and ACE C++ networking library.
- Developed parts of the workflows pertaining to Enhanced Auditing feature and developed REST APIs for Auditing the Java Clients using JNI.
- Developed a tool using ACE network programming toolkit for performance analysis of various POCs for securing the communication channel between CORBA services.

### NVIDIA Graphics Pvt. Ltd.

#### Intern Software Developer

Aug 2014 – Mar 2015 (8 months)

Pune Area, India

- Developed a Sanity Check Infrastructure for the NVIDIA Display Driver using C++, which decreased the time taken for chip bring up and display driver verification of GPUs by 50%.
- Added sanity tests for the NVIDIA's Frame Capture analysis tool library (FCAT) to measure the rendering performance of a GPU.
- Developed a REST (Representational State Transfer) interface to the Sanity Infrastructure using C++ REST SDK.

## PROJECTS:

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### Distributed Key-Value Storage on Android

- Developed a failure resilient distributed key-value storage inspired by Amazon Dynamo that provides chain replication, linearizability and availability.

### Snow Family (Avalanche) Distributed Consensus Protocols

- Developed the [Snow family](#) of probabilistic, leaderless Byzantine fault tolerant consensus protocols using the [Paxi](#) framework in Golang.

### Advanced Scheduler for Pintos Operating System

- Designed and developed an advanced multilevel feedback queue scheduler in the [Pintos](#) operating system kernel.

## TECHNICAL SKILLS:

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**Programming** : C, C++(Proficient) | Core Java, Golang, Perl (Intermediate) | Shell Scripting, SQL (Familiar).

**Tools/ Platforms** : MS Visual Studio, WinDBG, GDB, Vim, Git, Perforce (Version Control), Windows, Linux.

**Other skills/API libraries** : Multithreading, Socket Programming, OpenSSL, cURL, ACE, Win32API

## RELEVANT ACTIVITIES:

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- **Treasurer**, Computer Science Graduate Student Association, University at Buffalo, New York