

VIDHATHA S VIVEKANANDA

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WORK EXPERIENCE

Software Engineer III **March 2017 - current**

Catchpoint Systems, Bangalore, Karnataka

- Designed and implemented a winning hackathon idea to a full-blown product that provides **end-user experience monitoring**.
- Built a **cross-platform SDK** that exposes APIs to perform network tests and gather system diagnostics.
- Built a backend application that utilizes the endpoint SDK to perform recurring network tests and communicate the data with the database.
- Implemented the backend application to also communicate with a chrome extension via **native messaging** to gather web vitals when a user visits a particular site.
- Design and implementation of **cross-platform network monitors** that are used to analyze and test network protocols such as TCP, UDP, SSL, FTP, MQTT, DNSSEC.
- Worked on monitoring **Citrix Xen App**, an application virtualization software.
- Design and implementation of a **Wi-Fi monitor** to analyze and measure the performance of a Wi-Fi network.
- Design and implementation of **cross-platform custom monitors** that would provide the clients the capability to create their monitoring solutions based on their specific needs.
- Worked on the **communication layer** between remote agent nodes and the database using a queuing mechanism.
- Participated in bi-yearly company **hackathons** and **won 3 in 4 years**, while coming 3rd in one more.

Software Engineer

August 2011 – August 2016

Teradyne Inc, Agoura Hills, California

- Designed a startup **Configuration service** to create logical software objects to map tester resources.
- Implemented 10+ interfaces to provide tester configuration data to the rest of the IG-XL software.
- Inter-process communication with a windows service to gather the tester hardware information.
- Designed an **Instrument Pattern loader and Compiler** to load instructions to memory.
- Implemented a logical board driver that receives and processes microcodes and a physical board driver that calculates equivalent HW instructions for the microcodes and populates a memory lookup table.
- Designed an efficient **SSL licensing scheme** involving the client-server architecture over the network.
- Ported and optimized a pattern cluster of legacy C++ projects to C#.

Web Intern, Date Instruments, Ramona Blvd, California

Summer 2010

- Designed and created a new company website

UNIVERSITY PROJECTS

- Implemented a "**Distributed File Sharing System**" using peer-to-peer technology, where a user can store, retrieve, or delete a file and perform various types of searches. (Socket Programming, Pthreads, UNIX System Calls)
- Implemented a Hospital Management System simulating core functionalities of an **Operating System** using Nachos.
- Built an **IP router in user space** optimizing its performance (packets/sec).
- Research Paper discussing policy issues related to "**Security in Cloud Computing**".
- A research paper examining **High-Speed Intrusion Detection** using SNORT.

HACKATHONS/ OTHER PROJECTS

- Built a low memory footprint **end-user experience monitoring** application that could run a Raspberry Pi 0.
- Built a Wi-Fi monitoring node on a Raspberry Pi integrated with temperature and GPS sensors.
- Built a self-healing system that detects and diagnoses issues on the company's remote network nodes.

EDUCATION

Master of Science, Computer Science

University of Southern California, Los Angeles, California

May 2011

GPA: 3.6/4.0

Bachelor of Engineering, Computer Science

Visvesvaraya Technological University, Karnataka, India

July 2009

GPA: 3.7/4.0

SKILLS

- **Languages:** C, C++, C#
- **Networking:** Socket programming, TCP, UDP, SSL, Wi-Fi, FTP, MQTT.
- **Tools:** Visual Studio, VS Code, Vim, Wireshark, Pcap, Git, CMake, Gtest, Gmock
- **OS:** Windows, Linux, Mac, Raspbian
- **Software Process:** Waterfall, Agile, Kanban