ANOOP VALLUTHADAM

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Summary

- **Pythonista**
- Have been developing highly scalable, available & fault-tolerant platforms on the cloud since 2011.
- Worked in popular opensource Virtualization technologies.
- Possess a good working knowledge of various Distributed Systems and Cloud Computing platforms.

Education	VMKV Engineering College, salem, Tamilnadu.
	BE in Computer Science and Engineering, 2007 -2011 Batch.
	Aggregate Mark : 78%
	Diploma: 71%, 12th STD: 73%, 10th STD: 75%
Technical Skills	***Tools***: Familiar with basic GNU/Linux tools. GlusterFS, Gparted, ClusterLVM. Exposure to mercurial/git. Strong knowledge in Wireshark and p0f internals, NLTK
	Machine learning library: PredictionIO
	Languages: **Python** / C. Exposure to Elixir, go-lang
	Framework: Web2py, Exposure to Tornado, bottle and Flask
	Debuggers: Strong knowledge in GDB.
	DataBase: MySql
	NoSQL/non-relational: Riak, Cassandra, Redis
	Hypervisors: OpenVZ, Xen
	Server automation: Fabric
	Linux: System Calls, POSIX Threads, Semaphore, Mutex/ Lock
	Microcontroller: Currently learning MSP430 architecture / assembly language.
	Exposure to Arduino / Rasberry-Pi
	Others: Amazon SQS, Familiar with various APIs like Facebook/Gmail/Twitter/Forsquare etc, Amazon S3, DynamoDb

Exposure to	Linux, Network Security, Arduino, Objective C, Network Programming, Embedded systems, golang
Operating System	Linux

Professional Experience

Since May 2015	Software developer at Oracle, Bangalore, India
Sep 2012 – April 2015	Software developer at [MerchantRMS](#), Chennai, India
Aug 2011- Aug 2012	Software developer at K7 Computing Private Limited, Chennai, India

Open source Projects

Mozilla - [bztools](#)	This tool is used by Mozilla release management to send emails to the Firefox developers. It will query the bugzilla.mozilla.org database and send emails to Mozilla developers and their managers (if Mozilla staff). *Responsibilities:* • Bug fixes • nosetests for the whole project

Projects

Oracle Compute	Oracle Compute(Formerly known as Nimbula Direct)or software allows users to implement IaaS-style private, public and hybrid clouds. The software was aimed at both enterprise customers and service providers. It can manage both on- and off-premise infrastructure through a Web UI, an API or a command line interface. *Responsibilities:* • *Bug Fixes* • *Design and Implimentation of test Framework* *Software stack used:* **Python, Fabric, Elastic Search, MemCache, etc**

Growzippy user simulation.	A user simulation tool for Grozippy project. It will simulate all user activities like browsing, buying products from the website etc. *Responsibilities:* • Design and development of entire project *Software stack used:* **Python, selenium**
Backup Tool for GrowZippy	Back-up Tool for GrowZippy project *Responsibilities*: • Design and development of GrowZippy DB Back-up *Software stack used:* **Python, Cassandra, MySQL, Click-python library, Amazon S3**
Rollup Tool for Growzippy	Roll-up tool for Growzippy project *Responsibilities*: • Design and development of GrowZippy DB Roll-up tool *Software stack Used*: **Python, Cassandra, MySQL**
Search Engine Optimization tool	A tool for Search engine optimization recommendation *Responsibilities:* • Design and development of SEO analyzer back-end *Software stack Used:* **Python, Amazon S3, Redis, Beautifulsoup etc**
Greetmeme	A Social network crawler. *Responsibilities:* • Design and integration of Facebook API to the backend. • Process User's Facebook information. • Find Close friends, Most wished people, Find Celebrities details from user's like list, etc. • Implement Natural language processing into Facebook data to give user about latest news about his interests

MerchantRMS	*Software stack Used:* **Python, MySQL, Riak, Amazon s3, DynamoDB, NLTK, REST/HTTP.** The integrated solution provided by MerchantRMS is an automated process for **credit card fraud prevention**. The system closely examines the authenticity of the payment instrument before sending it to the payment gateway for processing the transaction. The customer does not become aware of the indiscreet screening process. The merchant receives an alert automatically in case of **credit card fraud detection** *Responsibilities:* • Design and implementation of NPA(Network packet analyzer) • Design and implementation of detection of TOR and VPN *Software stack Used:* **C, redis**
K7 VirusSecurity for Mac	Development of Mac version of the Industry renowned K7 Antivirus from scratch. Protects a Mac system from virus threats. *Responsibilities:* • Design of an updater for K7 VirusSecurity. • Bugfixes. *Software stack Used:* **Objective C**
StackIron	StackIron is a virtualization platform. One of the latest products in its domain. It is a multi-hypervisor manager. StackIron provides a unified interface to manage all open source hypervisors. A pure python implementation for which we developed our own development framework and billing solution. It comes integrated with third party billing solutions like WHMCS as well. All basic functionalities like backup, templatization, migration, SAN and Local storage management work seamlessly across all hypervisors. StackIron provides fine grained user control and allows various levels of user configurations at runtime. StackIron has an optional VLAN and bonding functionality along with Basic Firewall and traffic controlling. *Responsibilities:* • API Design.

- Design and development of VM backup and VM migration
- Wrote driver for openVZ and Xen.
- Implementation of GridStorage.

Software stack Used: Python, **C, OpenVZ, Xen, HTTP/REST, GlusterFS, XML-RPC etc**

Personal Projects

Design of a simple 16 bit microprocessor (called `Hack') using a Hardware description language.	Starting from a single primitive NAND gate, we used a hardware description language to build more complex gates, multiplexers, demux's, registers, memory, an ALU and a simple control logic to glue all the components together to create a simple 16 bit processor.
Design of an assembler.	A simple 2-pass assembler was written in Python to convert Hack assembly to machine code.
Design of a stack based Virtual machine	A Python program was written to convert programs in a simple stack based VM language to Hack assembly code
Design of a simple parser for an Object Based Language	A parser was written for an object based programming language.
OCAP	A web application was written using J2EE to assist the polytechnic admission process in Kerala.
Implementing Huffman compression in Python	A python program for Huffman coding, which is a lossless data compression technique.
Design of a simple logic-circuit simulator in Python	A simple python program for simulating the working of logic gates and Combinational circuits.
A simple Game:Creep	A simple snake like game in python, using pygame module.
Design of an AVL tree data structure in	An AVL tree data structure was implemented in C and it was made

C and interfacing it with Lua	callable from the scripting language Lua.
Design of a simple shell with support for redirection and piping	A simple shell was written in C. The objective was to study the working of basic system calls.
Study of "ptrace" system call	
Implementing networking utilities	The working of the "ptrace" system call was studied by writing simple test programs. The objective was to understand how a debugger like "gdb" works.
	Networking utilities like ping / traceroute / simple chat programs were implemented in C / Python.