Obulapathi N Challa

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Skills

Expertise: Cloud Computing, Big Data, Data Science, Web Applications, Mobile
Software: Python, Go, Java, C, C++, Bash, HTML, JSON, XML, Linux and UNIX
Cloud: Amazon AWS, Google Cloud, OpenStack, Docker, Fig, CoreOS, Salt, Heat
Big Data: Hadoop, HDFS, MapReduce, Hive, HBase, PigLatin, Spark, Storm, ZooKeeper, Sqoop, Mahout, Oozie, HCatalog, Ambari, Splunk, Elasticsearch
Data Science: ML, Statistics, Visualization, Analytics, Pandas, OpenNLP, NLTK
Databases: MySQL, NoSQL (Cassandra & MongoDB), Datastore, Redis, Neo4j
Web Stack: REST APIs, WSGI, Django, Flask, Twisted, Jinja, Werkzeug
Networks: Computer, Wireless and Ad Hoc Networks, TCP/IP, 802.11, 802.15, NS3
Messaging: RabbitMQ, ZeroMQ, Kafka, Zaqar, Celery, Taskflow, Task Queue
Python: Requests, Fabric, NumPy, SciPy, Pillow, Matplotlib, Packaging, Sphinx, PyQT
IOT: Atmel AVR, PIC, ARM, Flash, EEPROM, Sensors, I2C, SPI, USART
Security: Computer, Network and Data Security, Bitcoin, Blockchain, Metaspoilt
Others: Git, CICD, Agile, JIRA, Kanban, Scrum, Hacking, Android, Ping Pong

Education

University of Florida Fall 2008 - Fall 2013
PhD in Electrical and Computer Engineering GPA: 3.52
Dissertation: CubeSat Cloud, a framework for distributed storage, processing and communication of remote sensing data on CubeSat clusters

University of Florida Fall 2008 - Fall 2010
Masters in Electrical and Computer Engineering GPA: 3.58

DAIICT Fall 2003 - Spring 2007
B.Tech. in Information and Communication Technology GPA: 3.67

Experience

Software Developer II at Rackspace Inc. March 2014 - Current
Designed and developed CSD transport mechanism for synchronizing Master and Slave databases. Implemented reliable asynchronous APIs for registration and database record transportation based on C++ Boost asio library and Google ProtoBuffers.

Software Architect for TIFAC (Volunteer) Jan 2015 - Current
Designed and developed CSD transport mechanism for synchronizing Master and Slave databases. Implemented reliable asynchronous APIs for registration and database record transportation based on C++ Boost asio library and Google ProtoBuffers.

Software Development Engineer Intern at Amazon AWS Summer 2013
Designed and developed CSD transport mechanism for synchronizing Master and Slave databases. Implemented reliable asynchronous APIs for registration and database record transportation based on C++ Boost asio library and Google ProtoBuffers.

MAC Protocol Developer Intern at xG Technology Fall 2011
Worked on xMax, a real-time data and voice protocol. Designed, developed and tested the xMax logging Linux kernel module to report network status and statistics to /proc.

Radio Software Integration Intern at BlackBerry Summer 2011
Did board level and Wifi testing on BlackBerry smart phones; Wrote python scripts to extract failures from logs and analyzed them to root-cause the calibration issues.

Research and Teaching Assistant at University of Florida Spring 2009 - 2013
Designed and built CubeSat Cloud; Contributor to SwampSat; TA for Wireless Networks.

Research Assistant, Research Engineer at DAIICT Fall 2006 - Summer 2008
Built CENSE sensor network; lead WildCENSE and Tiger Image Sensor Network projects; Managed the Embedded Systems and Sensor Networks Research Lab.

Projects

Poppy and Zaqar April 2014 - Current

Created Bitcoinpy, a Python implementaiton of Bitcoin with focus on hackabilty and modulatiry. Analysed Bitcoin blockchain using Hadoop, Hive and Hbase.

Boltcoin & Reversecoin Jan 2013 - Current

Created Bitcoinpy, a Python implementaiton of Bitcoin with focus on hackabilty and modulatiry. Analysed Bitcoin blockchain using Hadoop, Hive and Hbase.

Bitcoinpy and Blockchain analysis Fall 2013 - Current

Created Bitcoinpy, a Python implementaiton of Bitcoin with focus on hackabilty and modulatiry. Analysed Blockchain using Python Pandas.

CubeSat Cloud Fall 2010 - Fall 2013

Designed and implemented "CubeSat Cloud", a framework for distributed storage, processing and communication of remote sensing data on CubeSat clusters.

FUNSAT V & VI Fall 2008, Fall 2009

Lead UF's Small Satellite LASER Communication subsystems team in FUNSAT V and FUNSAT VI; Bagged first prize in FUNSAT-V satellite design competition held by NASA.

SwampSat Fall 2008 - Present

Designed communication protocols for SwampSat. Designed and developed SwampSat cloud application, a distributed packet collector, decoder and analyzer in Python on Google App Engine.

CENSE, WildCENSE and SmallCENSE Fall 2005 - Spring 2008

Designed and developed CENSE, a delay tolerant WSN testbed for monitoring the habitat of wildlife. Developed WCFFS flash file system and wrote several device drivers.

Linux from scratch Spring 2005

Built a custom Linux system from scratch, entirely from source code.

Activities

GatorLUG University of Florida Student Group Fall 2009 - Spring 2013

Organized and / or taught classes on Python, C++, Android and Cloud Computing.

ASHA, GDG, ICEC, SF Bitcoin Devs, SIT, SSDC Fall 2008 - Present

Member, active participant and volunteer of the above mentioned clubs.