Datta Maddikunta

Senior Software Engineer - Google Inc (Consulting)

Sunnyvale, CA - Email me on Indeed: indeed.com/r/Datta-Maddikunta/672293986be7772f

• 13+ years of experience in software development, debugging, design, Production Support,Test Automation and testing in telecom, e-commerce, retail and geo
domains.
• Experience working with waterfall and Agile software development methodologies.
• Experience working with Object Oriented Programming and design patterns.
• 8+ years of experience working with Python 2.x.
• Excellent troubleshooting and issue isolation skills through various analysis tools and debuggers.
• Hands on experience in developing software in C ,C++,STL.
• Hands on experience with test automation in wireless environment.
• Test automation in Python and Unix Shell scripts.
• Working knowledge in network protocols like TCP,UDP,IP and HTTP protocols.
• Good exposure to wireless standards like GSM and CDMA.
• Hands on experience of UNIX network programming with POSIX sockets (sockets API) and POSIX threads (pthreads API).
• Good exposure to interprocess communication techniques like semaphores, shared memory etc.
• Good exposure to maps and geo environment.
Authorized to work in the US for any employer

WORK EXPERIENCE

Senior Software Engineer

Google Earth Enterprise - Mountain View, CA - March 2013 to Present

1. Project: Google Earth Enterprise Role: Senior Software Engineer
Environment: C++, STL, Python, WSGI, Ubuntu, PostgreSQL, Perforce, Pulse.
Client: Google Inc. Location: Mountain View, California, USA Mar'13-Present

GEE has a suite of products which will fuse the Imagery, Terrain and Vector information into layers and customize these layers to be served as 2d Maps and 3d globes.

Responsibilities:
1. Develop and maintain search and various services using Python_v2.7.5, Apache and WSGI web servers.
2. Develop and maintain Web Mapping Service (WMS) using Python_v2.7.5, Apache and WSGI web servers.
3. Perform feature implementation using C++, STL and Python for Fusion and GEE server.
4. Perform regression, unit, integration and user testing.
5. Maintain Pulse, InstallAnywhere and Perforce based build and release system and generate timely builds.

Senior Software Engineer

PayPal Location - San Jose, CA - June 2012 to February 2013

2. Project: Davis Integration Role: Senior Software Engineer
Environment: C++, RH Linux 5.4, Jira, Git, Oracle 11g, Fusion, Google Unit Framework
Client: PayPal Location: San Jose, California, USA Jun '12- Feb '13

Responsibilities:

• Perform code analysis for implementing the Davis integration with PayPal payment system.
• Perform code changes in C++ for the implementation of Davis features
• Perform unit testing using the Google Unit Test Framework (GTest , GMock) for testing the C++ code.
• Perform end-to-end integration testing with other domains in the PayPal system
• Perform code coverage analysis using the Cobertura and Sonar Systems

Senior Software Programmer

Cisco Systems Inc - Atlanta, GA - March 2012 to June 2012

3.Project: Metadata Delivery Service (MDS) Role: Senior Software Programmer
Environment: C/C++, rapidXML, CCM, code collaborator, SUN Solaris, SQLITE3, STL, POSIX Sockets/ PThreads
Client: Cisco Systems Inc Location: Atlanta, Georgia, USA Mar '12- Jun '12
Metadata Delivery Service (MDS) is a proxy service which works as a mediator between the Arris VOD (Video On Demand) server and the Set-Top Box clients (STBs) .MDS converts the metadata format of the Arris VOD to that of the MediaSuite format to enhance the TV guide browsing experience of the VideoScape customers
Responsibilities:
• Developed algorithms to transform the metadata from one format to the other using C++ STL containers and SQLite3 open source database APIs
• Developed C++ code for parsing the XML based metadata using rapidXML parser.
• Developed TCP/IP based socket programs to connect to the VOD hosts
• Perform unit testing for proper functioning of the code

4.Project: Receiving & Replenishment

Quality Assurance Onsite Lead

The Home Depot(consultant) - Atlanta, GA - December 2010 to February 2012

Location: Atlanta, Georgia, USA Dec '10-Feb'12
Receiving and Replenishment involves the process of re-storing the items in the stores to the minimum required levels and involves the process of receiving the goods from the various vendors
Responsibilities:
• Perform activities as a lead with an offshore team of 2 members, for projects based on Agile Software Development method
• Participate in design and business requirements meetings
• Gather project requirements from the business teams
• Write test scenarios and test cases from the business requirements using HP Quality Center 9.0 tool
• Execute test cases on the First Phone wireless device running on Windows Mobile OS and report bugs to the development teams
• Coordinate with business and development teams to identify issues and provide solutions

Software Engineer

Qualcomm(consultant) - San Diego, CA - October 2007 to December 2010

MediaFLO is a mobile broadcast platform for the delivery of high-quality entertainment and information, including streaming video and audio, Clip casting media, IP data casting and interactive services. FLO is an open, globally-recognized air interface technology standardized by the Telecommunications Industry Association (TIA) and recommended by ITU-R

A. Test Automation Framework: MediaFLO automation framework is based on python and used to automate the regression, functional and integration testing.
Environment: C++, Python_2.4.3, Redhat Linux, POSIX Threads, Oracle 10g, SQL, TeamCity

Responsibilities/Tasks:

• Designed and developed feature driven automation framework, based on singleton design pattern for testing the MediaFLO system on an End-To-End basis using Python_v2.4.3. This framework used TeamCity-v5.0.1, which is a Java-based build management and continuous integration server, as a front end GUI. This framework used XML-RPC as the transport mechanism for interacting with the various components/hosts

• Prepared python unit test cases (called PyUnit) using 'nosetests'

• Automated provisioning of MediaFLO system using SOAP-UI_v1.7/2.5 and Python_v2.4.3. SOAP-UI used XML as a message format and SOAP/HTTP to envelope and transport messages .Groovy scripts were used to query Property files and databases to provide inputs to the SOAP based messages

• Automated SOAP based web-service testing using SOAP-UI, Python_v.2.4.3. Web-services will be accessed using the W3C WSDLs

• Ran scheduled/on-demand iterations of the MediaFLO software releases on a daily basis

• Prepared the reports of failed test scenarios and communicate with developers and testers

• Prepared python based APIs, which provide abstraction to the automation framework, to be used by the testers to write PyUnit test cases

• Prepared documentation of all the APIs and the working of the automation framework

• Designed and developed a python based automation framework for testing the Enterprise Management System (EMS), which used SNMP protocol for network management, monitoring and reporting of the MediaFLO system .This framework used PySNMP library to implement the snmpget, snmpset, snmpwalk and snmpstatus. Input files were available in the form of MIBs (in ASN format) and OIDs were used to identify the objects uniquely

• Developed a python based framework for testing the unicast interface of the MediaFLO system. Unicast interface was used for activation/de-activation, subscription/un-subscription of the MediaFLO service and for uploading the device logs. This framework could be extended for various new mobile devices and new unicast features

• Performed issue isolation and debugging using tools like pdb and tcpdump

B. Application Name: MediaFLO Information Distributor (MID)
Environment: C++, STL, Redhat Linux, POSIX Threads, Oracle 10g, SQL

The purpose of the mid application is to distribute the MediaFLO system proprietary message flows like notifications, provisioning, interactive flows etc to single or multiple hosts for analyses and testing. The inputs can be fetched from two sources - either from a multicast IP carrying the message flows or from an Omnivore Server (OCS) which captures super frames from a multiplexer (MUX).In the latter case, MID acts as an Omnivore client, which gives MUX output in XML format.

Responsibilities:

• Designed and developed the MID application using Singleton design pattern

• Developed C++ code to read messages from multicast IP as UDP datagram's

• Developed C++ code to parse the various message flows and extract information out of the flows

• Developed C++ code to read from the Omnivore Server (OCS) super frames , parse and process the messages to create XML format files

• Performed multi-threading using POSIX Threads to read and process the message flows

• Performed pointer arithmetic using pointers and memory copy using functions memcopy and memset

• Performed regular maintenance by adding new features and changes in system flows

C. Application Name: PD Simulator
Environment: C++, STL, Redhat Linux, POSIX Threads

Provisioning Distributer (PD) is one of the components of MediaFLO Provisioning System (MPS).PD interfaces with an Oracle database, called PROV-DB, and stores all the provisioning information of the MediaFLO system. The provisioning information includes network provisioning, service provisioning and package provisioning .All the other components interact with PD to fetch the provisioning information over the Enterprise Message Bus (EMS).PD Simulator is a miniature version of the PD .PD SIM is used to test and verify the MediaFLO releases, without the need of an actual PD.

Responsibilities:
• Developed C++ code to simulate the working of the PD using File I/O approach instead of a database.
• Developed C++ code to register the PD Simulator with an Enterprise Message Bus(EMS) to interact with other MediaFLO system components
• C++ features used include classes & objects, inheritance, streams, inheritance, exception handling
• C++ STL used include vectors, maps and String

Software Engineer
VeriSign(consultant) - Hyderabad, Andhra Pradesh - January 2003 to September 2007

Location: Hyderabad, India Jan '03 - Sep '07

VeriSign PrePayIN, is an Intelligent Network (IN) solution which gives wireless operators the power to deliver advanced voice, messaging, and data content services to prepaid subscribers. PrePay IN comes with a support program, extended agent management, and a robust reporting system to give carriers greater control over their operations.

Responsibilities/Tasks:
• Developed SIP based interface capable of communicating with external network entities using SIP protocol as well as through TCP/IP communication with other internal PrePay components based on dispatchers and events model .The SIP gateway used was OMNI/SIP 9.0.2 ECN 1086.
• Developed C++ components for the PrePay IN modules like raters and writers
• Performed debugging , issue isolation, unit testing and software maintenance activities

EDUCATION

Bachelor of Technology in Electronics & Communication Engineering
JNTU - Hyderabad, Andhra Pradesh
1997 to 2001

SKILLS

C++ (10+ years), Python (8 years), TCP/IP Network programming (5 years), Interprocess communication (5 years)