**Kumar Rahul**

**Senior Python Developer**

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**Summary:**

*A Senior Level Systems and Application Developer with expansive repertoire of technology knowledge and experience ranging from Legacy Systems through Client Server and the Internet, covering application, system, Embedded platform, BIOS Development, API, backend database connectivity, common gateway interface, stored procedures and front end development. Object Oriented Design and Development.*

*Applications/Industry include Trading and Transaction for Financial Services, Banking, Publication, Music Rights Management System, Prototypes and APIs for enhanced and high-speed Data Feeds. Experience as Lead Developer, Project Manager/Leader, Sr. Systems Developer, Data Manager.*

Around 7+ years of experience of building an application interface, Cloud Security, web scrapping scripts using OO designing, UML modeling and dynamic data structures, Web/Application Developer/UI developer and coding with analytical programming using Python, Django, Flask.

Experienced of software development in Python libraries used: libraries- Beautiful Soup, Backbone.js, NumPY, scipy, Matplotlib, python-twitter, Pandas data frame, network, urllib2, MySQL dB for database connectivity) and IDEs - sublime text, Spyder, Pycharm, Emacs.

Experienced in project deployment using Heroku/Jenkins and using web services like Amazon Web Services (AWS) EC2, AWS S3, Lambda, DS (MySQL).

 Strong utilisation of Python Tornado Async server and communication and redis publisher mechanism.

Followed the best practice of Python such as PEP-8.

Worked on large data sets and performance optimization of delivering large datasets by using caching mechanism.

Experienced of software development in Python libraries used: libraries- Beautiful Soup, Backbone.js, numpy, scipy, matplotlib, python-twitter, Pandas data frame, network, urllib2, MySQL dB for database connectivity) and IDEs - sublime text, Spyder, Pycharm, Emacs.  
Proficient in Front end development experience using Python 2.7, Django 1.7/1.8, HTML, XML, CSS,JavaScript, Bootstrap, JQuery, JSON and, Angular.js 2.0, Node.js.

Experienced in working Asynchronous Frameworks like NodeJS, Twisted and designing the automation framework using Python and Shell scripting.

**TECHNICAL SKILLS: -**

**LANGUAGES:**

C C , C , .NET, PYTHON, INFO-BASIC, Bourne Shell, C Shell, PERL, SQL, MySQL, MS Visual Basic, OPENGL 2D/3D API, Macro Assembler, HTML, HTML4, DHTML, XMLSPY, OPENSSL API, APACHE server software JAVASCRIPT, CSS, JAVA, J2EE, EJB, RMI, JMS, Servlets, JDBC, XML, ASP, COBOL, FORTRAN, Python, Business Basic. O/S LINUX, AT T UNIX, UNIX System V, OSX, AIX, XENIX, SCO UNIX, Sun Solaris, WINDOWS NT, WINDOWS 2000, WINDOWS 95, WINDOWS 98, MS/PC DOS, OS/2, NEXTstep 486 version, VAX VMS, All Apple operating systems.

**SOFTWARE:**

All Relevant UNIX, AIX, LINUX, Borland and Microsoft C C compilers including MS Visual C . STL, XML, COCOA, WCAP, GDATA, ICAL and CALDAV protocols, PowerBuilder, TEMENOS GLOBUS T24 , PVCS, VCS, VxVM, VxFS, TEST DIRECTOR, Broadvision, Arena, Summit, Zope, Apache, Plone, Microsoft Macro Assembler compiler, Microsoft Windows SDK, MDK, DDK, Microsoft Windows API, IBMs AS400 OS400, OS/2 API for Presentation Manager, Novell NetWare, Informix, Oracle, JBoss Apache Administrator, WEBSPHERE MESSAGE BROKER, WEBLOGIC, WEBLOGIC INTEGRATION SERVER, SQL Server, MS/SQL, UNIFY, NEON, SAP R/3, Stored Procedures, ILOG, COM, DCOM, UML, TogetherSoft Group Dev. Tool, X-Windows, Lotus Notes, Lotus Freelance, Lotus 123, Lotus Wordpro, Open Interface from Neuron Data, CATIA Version 5 Mechanical Design Package, TSO/CICS, Apple Script, several Video Toaster software products, QuickTime.

**HARDWARE:**

All Intel processors including Pentium, all 68000 based processors including all Apple products, Sun and HP work stations, AS400, OS400, VAX 11780s, PDP 1170s 1134s, 1032s, IBM 3090s 4381s, Plexus P60s P40s, various LAN and WAN hardware, Hard and soft ICE machines, line monitors, EPROM code generators.

**Education:**

**Bachelor’s in Computer Science**

**Pune University,Pune India2010.**

**WORK EXPERIENCE:**

Devops Engineer/ Sr. **Python Developer**

**Symantec, NYC, New York** | **June 2015 –**

**StillProjects:**

Designed and developed integration methodologies between client web portals and existingsoftware infrastructure using SOAP API's and vendor specific frameworks.

Worked on a customer support application serves to build clients and services covering the entire customer life cycle to help with Account details, subscription details, user details, program details, history, content search, credit card change details, recent activity, manage calls and help site services like call us back, chat with us, contact us etc.

Preprocessing associated with images and data in MRI and PET and extracting quantitative information from those data with Python.

**Project Descriptions and Responsibilities: -**

Improving the performance of the Watchguard SSL 100 500 VPN appliance by finding bottlenecks in the embedded platforms dedicated operating system and applications.

Using OPROFILE to find multi-threaded programming bugs that drain CPU cycles. Modifying BUSYBOX.

Stripping out unused code to enhance its speed. Re-writing application functions to improve program performance. Added caching using BIND9 and NAMED cache for VPN 100/500 Access Client DNS Resolver. Skills and tools include SSL, OpenSSL, ECLIPES IDE, V-TUNE, J-Meter, Java, C, Bind, Bind9, Named, RDNC, DIG, SFTP, UBUNTU LINUX, Windows XP, Visual C , DEBIAN LINUX, DDD with GDB debuggers, Performance testing tools, Security Certificate validation Encryption, SSH, SFTP, .conf files, .hosts files, multiple scripting languages including Perl, Bourne, korn, Python, etc.

Researched feasibility of HA , High Availability Server update design for new product line and various Computer on a chip/ARM development strategies. The product itself can be viewed at WatchGuard.com .

Embedded LINUX project requiring an experienced lead developer to build an embedded development platform for the company's new POS-07 product then implement the same across the entire development team and fix what was a list of outstanding bugs from a previous development effort.

Tools included REDHAT LINUX, IBM AIX, 10g, DB2 for i V5R, DBMON, Plan Cache, a legacy DEBIAN LINUX platform, CENTOS with the new REDHAT platform, KDE Tools, GTK, OpenGL, Clutter, Linux development, optimization, and Configuration management tools, SIRID for bug tracking, KDIFF3 for code evaluations, DDD GDB for debugging, CVS for version control, OPENOFFICE for WP, REMOTE DESKTOP VNC for remote access, C, C , STL, C , .NET, IIS, Windows programming, PERL, PYTHON and other scripting languages, Optimized appropriate Compilers, LINUX BIOS Optimizing, BUSYBOX Utilities embedded on the POS device, etc. The device by the way is an automated cash register / point of sales platform, a POS device.

This project was a C .NET, IIS, Windows conversion to QT4 C LINUX. Responsible for LINUX Glidesync Development. Wrote new Glide Society LINUX front, middleware and backend C , STL applications. Also coded using QT4, QT4 UI Designer, qMake, QT3, QT3TO4 conversion tools, SSL, OpenSSL, PKCS 11 Engine, Sun NetBeans IDE, etc. Developed in C , GTK, OpenGL, Clutter, IBM AIX DB2, DBMON, Plan Cache etc., Linux development, optimization tools, and Configuration management tools, LDIF parsers, vCard parsers, iCal parsers, CGI. Developed Contacts, vCard and iCal internet based data upload backend and front end for Glidesync.

WCAP, GDATA, ICAL and CALDAV protocols, JBoss Apache Administrator, Oracle 10g AS, JBoss SOA, Apache HTTPd, Apache Tomcat and PHP architectures, OPENGL 2D/3D API, MP3, MP4, Apple OSX, COCOA API's, WEBSPHERE MESSAGE BROKER, Transmedia is a boutique Silicon Alley up and coming data management firm in NYC with a multi thousand web customer base.

The last phase of this project was to make a mobile phone / PDA scaled down version of this same product using Mobicent OS, codecs etc. They rely heavily on open source for product development. All deliverables were met on time and within budget. All code was required to be multiplatform compliant and cross platform re-usable.

Developed and implemented algorithms for DTI Tensor Fitting with Camino and Python. This includes mapping fractional anisotropy and calculating axial, radial and mean diffusivity.

Involved in tasks Designing, Developing and building a system using Python, Jython, Shell Scripts & Perl to automate Oracle patching, Grid Patching, Upgrade, Migration & rollback. Also, Build & coded UBS Requirements into DMA workflows to automate Oracle Tasks.

Integrated AWS-RDS MySQL, Oracle and Aurora DBs to AWS-Hive EMR using DynamoDB with direct connect VPC-to-VPC. As well as coordinated OIM/OAM-Child federated to AWS-IAM-Master. Provided Master and Child User Entity Roles/Privs from the AWS-IAM-Master.

Continued development(CD) and Continues Integration(CI) implemented the user registration and login feature for application processes.

Designed, developed, coded, worked in penetration testing and implemented a concurrent – multi-parallel – event oriented-processing - AKKA Actor System and Actors; to consume Scala Spark-SQL Rules which aggregated data to produce Quality Performance Reports (QPR) on Fiscal projections against Apprentice and Intern Job data.

Developed various Python scripts to find vulnerabilities with SQL Queries by doing SQL injection, permission checks and performance analysis and Prepared Scripts in Python and Shell for Automation of administration tasks.

Constructed and involved in penetration tested Production EC2 Container Service Stacks; as well as installed, managed and designed DOL - Docker Containers onto AWS-GovCloud.

Created required shell or python scripts for data push from Informatica/Teradata to S3.

Created Cloud Formation and use the CF to build DEV/QA/Prod environments.

Responsible for Loading via Elastic-Cache: DOLETA-NoSQL Grants Program Document Data; to AWS-DynamoDB; for AWS-EMR Grant Fulfillment Analysis.

Designed & Implemented database Cloning using Python as well as Build backend support for Application from ground up using Shell scripts.

Used Test driven approach (TDD) for developing services required for the application and Implemented Integration test cases and Developing predictive analytic using Apache Spark Scala APIs.

**Environment: Python 2.7, Django 1.6.2, AWS Ec2, AWS S3, PostgreSQL, Scala, Apache Hadoop, Apache Spark, Puppet, Angular js 2.0, Erlang, Selenium, API, Docker, AJAX, SPLUNK, Github, Radar client, CSS, HTML, HTTP, JSON, REST, Shell scripting, Apache2, Sublime, Pycharm, XML.**

Sr. **Python Developer**

### Bank of America – Financial Domain

**Clifton, NJ | November 2013 - May 2015**

**Projects:**

Developed web-based LAMD stack applications using Python and Django for large dataset analysis Created and optimized work flow automation tools to facilitate data interpretation and presentation via statistical modeling techniques.

Database modeling and design. Involved in developing and implementation of the web application using Ruby on Rails.

**Project Description and Responsibilities: -**

Simple web app for reviewing sitcoms that gives users the ability to view, add, review, up/down vote, search, etc.

Utilized Active Record eager loading to improve rendering time of index pages, incorporated up/down voting, reviewing, and several custom sorting methods for shows to provide smooth user experience.

Developed a GUI application using python and Bank of America's Quartz environment that categorized TBA securities and monitored their net trading volume in real-time in terms of 10-year equivalents.

Cross-referenced Seat Geek and Spotify APIs to get album artwork and track previews for each artistProvide customized script and application code for Real-time pricing, exchange data, compliance monitoring for the trading platform using Front Office, Middle Office, and Back Office functions for multiple asset classes such as FX, FI, IRD, CD and other structured instruments.

Worked on XML documents based on XML Schema definition (XSD) with python scripts to load the data to database.

Boston concert aggregator that provides a comprehensive list of shows in Boston with track previews, album artwork, tagging, up/down voting, and more to help users find the best show in town and Worked with the Biz team and BPR to review the list of new changes required and prepared the LOE of the various phases of the project.

Involved in tasks Designing, Developing and building a system using Python, Jython, Shell Scripts & Perl to automate Oracle patching, Grid Patching, Upgrade, Migration & rollback. Also, Build & coded UBS Requirements into DMA workflows to automate Oracle Tasks.

Determined optimal business logic implementations, applying best design patterns

Increased speed and memory efficiency by implementing code migration to convert python code to C/C++ using Cython

Automated data extraction, Transformation and Loading(ETL) process using python

Designed, developed, coded and worked in penetration testing in customized DOL-AWS GovCloud Node.js Security Monitoring of VPC Zones using AWS – Lambda to load customized Spark-Scala GraphX Application.

Worked in Apache CGI, Cherrypy, python and Bash programming on Red Hat virtual machines to maintain and automate Splunk server deployments and other in house IT operations.

Designed logic for semantic procedures and aggregate tables using standard SQL/PLSQL.

Developed Python scripts to monitor health of Mongo databases and perform ad-hoc backups using Mongo dump and Mongo restore.

Involved in Python OOD code for quality, logging, monitoring, and debugging code optimization as well as wrote Python modules to view and connect the Apache Cassandra instance.

Utilized standard Python modules such as csv, robotparser, itertools and pickle for development.

Used Pandas library for statistics Analysis and developed web pages using ASP. Net, C#, HTML, CSS, AJAX, Java Script, JQuery and IIS. Used ADO.NET Enterprise Library to connect with SQL Server Database.

Developed entire frontend and backend modules using Python on Django Web Framework.

Created a custom CMS built using Django, AWS (Amazon web service), REST, Json with JavaScript++, JQuery, AJAX components, worked closely with designer. Converted Photoshop images into XHTML/CSS.

Implemented a selectable template structure in Django making it possible to change the HTML layout and design based on site URL and /or domain.

Performed troubleshooting, fixed and deployed many Python bug fixes of the two main applications that were a main source of data for both customers and internal customer service team.

Involved in debugging the applications monitored on JIRA using agile methodology and developed efficient Angular.js for client web based application.

Deployed production site using Apache 2.0 with mod python.

Worked on MongoDB database concepts such as locking, transactions, indexes, Sharding, replication, schema design.

Lead the team in development of the harassers using the Python which involved development of several flows and state machines in the memory controller.

Involved in Development of Python APIs to dump the array structures in the Processor at the failure point for debugging as well as development of the break point tool using Perl and Java User Interface.

Worked with team of developers on Python applications for RISK management.

**Environment: Agile, CSS, HTML, HTTP, JSON, NumPY, Panda, AWS, Hive, PostgreSQL,MySQL, REST, Shell scripting, Sublime, Pycharm, SQLite, web services, XHTML, XML.**

**Python/Erlang Developer**

### AppleOne – Workforce Management Domain

**Scottsdale, AZ | March 2012 - November 2013**

**Project:**

Designed robust, scalable, secure, and globalized web-based applications.

Created and managing the batch processes for retrieving Market Data, Valuation and Greeks for various VAtreaties (Python).

**Project Description and Responsibilities:**

UNIX expert for cross platform UNIX/WINDOWS fixed income server network supporting London, United States and Asian data server farms. Works closely with development teams and business analysts to integrate, maintain, support and modernize all fixed income software content and operating systems. Is the most senior experienced GSD in Stamford Connecticut location.

Acts as liaison to Savvis network support team. Technologies include SSL, SSH, and OpenSSL for security. UNIX, SOLARIS, LINUX, VCS, VxVM, VxFS, C, C , JAVA, J2SE, J2EE, WEBSPHERE MESSAGE BROKER, PERL, CShell, Bourne Shell scripting languages, as well as MS Windows XP Pro, MindAlign IMs, PowerBuilder, Embarcadero Technologies DB Software, Sybase DB, Oracle DB, MSAccess DB platforms, SecureID, UBS and Non UBS VPNs, Apache Servers, TCP/IP, FTP, HTTP, HTTPS, HTML, XML, IIS, C .NET, IIS, SCG log on procs, JBoss Apache Administrator, Oracle 10g AS, JBoss SOA, Apache HTTPd, Apache Tomcat and PHP architectures, Tunnel development using MiSys SUMMIT v4.x etc. I am also expected to continually provide best practices/procs for fixed income existing and proposed software development and platforms used by the bank in its worldwide business network both UNIX and Windows based, for internal trading operations, and external, customer, operations.

Responsibilities include maintaining testing and developing real time, live, and redundancy strategies for the worldwide network, fallback plans and disaster recovery strategies. On call 24/7 for firehouse problem solving. And of course, building, configuring and re-configuring UNIX, SOLARIS and RED HAT LINUX boxes. NIS, NFS, SMTP file systems, protocols etc. supported.

Rational Purify used to debug complicated application performance problems as well as various other IDE's and debuggers. Supported ION and TIBCO networks. Maintained MQ series messaging platforms as well.

The United Nation controls a worldwide bank whose 80,000 plus clients are employees and appointed officials to the United Nations located around the world. My responsibilities include all local development for the T24 TEMENOS GLOBUS T24 conversion project. I am the most senior programmer on staff. Local development means all developments for the North and South American continent.

The T24 conversion project is a multi-year effort to position the bank as a worldwide financial institution capable of functioning in a Close Of Business, COB, instead of End Of Business, EOD, banking universe. As the senior, most developer on staff, I developed or helped to develop more than 96 Customer and Account based TEMENOS GLOBUS T24 internet browser and desktop based applications / versions so far, resolved hundreds of UNIX and WINDOWS related system and application based development issues and was part of the Data Migration Team. Programming languages in use include C, STL, JBasic, XML, JAVA etc. on SUN SOLARIS and Windows 2000 Professional platforms. Test Director has been implemented to improve quality control and streamline defect management. I built a prototype PVCS cross platform version control management system for both SUN SOLARIS and MS WINDOWS.

I initialized a benchmark testing strategy for data migration download tools. Other software in use includes SUMMIT PLATORM products API's, CITRIX, WEBEX, REFLECTION SESSIONS, FTP, SSL, HTTP, HTTPS, SQL, OPENGL 2D/3D API etc. Databases included DB2, Oracle, MS ACCESS and SYBASE. The primary relational database for the TEMENOS GLOBUS T24 platform is ORACLE. My other responsibilities include build control for all five SUN SOLARIS platforms and of course support for existing software systems and applications. Integration of off shore developments and vendor interfaces for the new platforms is ongoing.

Developed and designed an API (RESTful Web Service) for the company’s website, e-mail marketing campaigns using HTML and CSS and Maintained customer’s relationship management databases (MySQL / PostgreSQL).

Developed Python based API (RESTful Web Service) to track sales and perform sales analysis using Flask, SQLAlchemy and PostgreSQL.

Developed server based web traffic statistical analysis tool using Flask, Pandas.

Developed views and templates with Python and Django's view controller and templating language to create a user-friendly website interface.

Worked in optimizing the python code made the code scalable as well as Involved in development of RESTFUL Web Services using Spring MVC to extract client related data from databases.

Used Python library BeautifulSoup for webscrapping to extract data for building graphs as well as built various graphs for business decision making using Python matplotlib library.

Worked on AWS using EC2 instances, setting security groups (ports, source) handling events between python scripts and Linux server.

Launched harasser across several threads along with memory stress test using the python wrapper.

Optimized database queries for PostgreSQL.

Created specific images using Python Imaging Library for the custom images used for each book as well as wrote scripts in Python for extracting data from HTML file.

**Environment: Python, Django, Erlang, RESTful Web Services, BeautifulSoap, NumPY, Java, MySQL, HTML, CSS, AJAX, JavaScript-Cloud services, Chef Apache Web Server, and Linux.**

**Software Engineer**

**Barclays – Banking Domain**

**Pune, India August 2010 – February 2012**

**Project:**

The scope of the project was to create and maintain an internal Point of Sale (POS) system which streamlines and authenticate payment workflow solutions to securely protect internal transactions and in turn authorize with the highest level of security available while keeping the payment platform simple and easy to use.

**Project Description and Responsibilities: -**

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Worked in development of several Python APIs and harassers that works both in Linux and windows and maintaining them using the revision control SVN.

Involved in Agile Scrum methodology, Agile meeting, Sprint and Release Planning meetings.

Push daily commits and branches to product repositories using Source Tree and used Jira as a project related tracking tool.

Developed MVC prototype replacement of current product with Django.Improved page load time by 30%.

Implemented RESTful API which returns data from PostgreSQL in JSON format.

Refactored and extended large existing Django/Python code base by maintaining PEP-8 code standards and fix the bugs.

Handled all the client side validation using JavaScript.

Worked on Core Java coding with strong understanding of Java, Spring, Hibernate, Collections, data structure and Event/Exception handling.

Involved in representation of the system in hierarchy form by defining the components, subcomponents using Python and developed set of library functions over the system based on the user needs.

Design, develop, test, deploy and maintain the website.

Implemented Services using Core Java. Developed and deployed UI layer logics of sites using JSP.

Developed front-end code with Ajax call in jQuery to retrieve data as JSON Object from controllers in back-end RESTful Server, then display the well-organized result in web pages by writing Angular JS controller. Also, used Angular.js filter to make the data searchable and sortable.

Worked on Web Services using Spring REST. Worked both on Service and Client Side.Developed modules in the application using Java/J2EE Analyzed the Design of the modules.    
**Environment:** Java/J2EE, AJAX, HTML, CSS, Web API'S, JavaScript, JSON, SQL Server, REST, Spring, Hibernate.