**Santosh Kumar Karnati**

2800 W 103RD AVE, APT 2128 FEDERAL HEIGHTS, CO 80260

[rani@sismos-solutions.com](mailto:santosh.2791kumar@gmail.com)

**PROFESSIONAL PROFILE**

* Around 10 years of professional experience in I.T Industry with strong hands-on analysis, design, and development of enterprise applications. exported/Imported data between different data sources using SQL Server Management Studio.
* Good experience in developing web applications implementing MVT/MVC architecture using Django, Flask web application frameworks. Proficient in developing Web Services (SOAP, RESTful) in Python using XML, JSON.
* Having experience in Agile Methodologies, Scrum stories and sprints experience in a Python based environment, along with data analytics, data wrangling and Excel data extracts. Experience in writing reusable and in test driven development using Unit Testing and Selenium. Experience in Linux Bash shell scripting and following PEP Guidelines in Python. Capability to successfully multi-task and prioritize work.
* Experience with Unit testing/ Test driven Development (TDD), Load Testing and worked on Celery Task queue and service broker using RabbitMQ. Good Experience in MVC frameworks like AngularJS, NodeJS and jQuery.
* Hands on Experience in Data mining and Data warehousing using ETL Tools and Proficient in Building reports and dashboards. Efficient knowledge in using different version control systems like Git, CVS and GitHub. Hands on experience in debugging and fixing the bugs and very good with support and maintenance.
* Involved in all the phases of Software Development Life Cycle (SDLC) using Project management tools JIRA, Redmine and Bugzilla. Extensive knowledge and experience in developing Single Page Applications (SPA) using AngularJS.
* Familiarity with development best practices such as code reviews and unit testing and experience in designing the Automation frameworks. Experience in Open Stack APIs and Socket Programming. Ability to participate to solve business and technical issues.
* Working Experience on various Python packages such as NumPy, SQLAlchemy, Beautiful soup, pickle, Pyside, Pymongo, SciPy, PyTables. Considerable Experience in working on different operating Systems like Windows, IOS, Linux (Ubuntu, CentOS, Red Hat).
* Experienced in NoSQL technologies like MongoDB, Redis and Cassandra and relational databases like SQLite, PostgreSQL, Dynamo DB, MariaDB and MySQL databases. Good Experience in Infrastructure Development and Operations involving Google App Engine and AWS Cloud platforms.
* Experienced in developing web-based applications using Python, Django, PHP, C++, XML, CSS, HTML, DHTML, JavaScript, Bootstrap and JQuery. Good knowledge in developing Mobile Applications. Experience in Object Oriented Design and Programming concepts in Python and Java. Working knowledge on Hadoop, Spark, Big data Technologies.
* Sound experience in Object Oriented Programming using concepts like Multi-Threading, Exception Handling and Data Structures. Maintained program libraries, user&#39; s manuals and technical documentation.
* Experienced in developing applications using Agile methodologies like Test Driven Development (TDD), Scrum and Sprints. Designed and maintained databases using Python and developed Python based API (RESTful Web Service) using Flask, SQL Alchemy and PostgreSQL. Setup Docker on Linux and configured Jenkins to run under Docker host.
* Setting up databases in AWS using RDS and configuring instance backups to S3 bucket. Performed troubleshooting, fixed and deployed many Python bug fixes of the two main applications that are main source of data for both customers and internal customer service team. Maintained and monitored frameworks like Django, flask.
* Implemented monitoring and established best practices around using Elasticsearch and used AWS Lambda to run code without managing servers
* Used Go Lang to create backend servers. Developed Micro services using Go language and developed corresponding test cases, Expertise in Production support and Knowledge of deployment using Ansible, Heroku and Jenkins.
* Experienced in Unit testing, Integration Testing, and generating of test cases for web applications using, Python unit test framework PyUnit, Pytest etc.
* Expertise in understanding Business Requirement Specifications, Functional Specifications and Design documentations and converting them into Test Scenarios.

**TECHNICAL SKILLS**

● Programming : Python, Java, , C++, PL/SQL, Linux

● Tools : Pycharm, Eclipse, Docker, NetBeans, Git, Jenkins.

● Web Technologies : HTML, CSS, XML, JavaScript, JQuery, Restful API’s.

● Web Framework : Django, Flask.

● Databases : SQLite, Oracle 11g, MySQL, MongoDB.

● Python Libraries : NumPy, SciPy, pymsyql, Mock, Pytest, pymongo, Sqlalchemy.

**ACADEMIC PROJECTS**

Big Data and Electronic Commerce – Architecture Design for an Online Grocery Store, [www.bigbasket.com](http://www.bigbasket.com)

Designed the architecture of an existing E-commerce application with huge user base and product listings using MongoDB, Elastic Serach, Redis, HDFS, MySQL and various Recommendation Systems. The Proposed Architecture was designed to withstand increased product and user base by providing very efficient real time performance. Concepts of NoSQL and Big Data were used in this project.

**EDUCATION SUMMARY**

Master’s (Management in Information Systems) : University of South Florida. May 2016

B.Tech (Computer Science & Engineering):Jawaharlal Nehru Technological University, India,April 2013

**PROFESSIONAL EXPERIENCE**

**Lumen Technologies Inc (CenturyLink), Broomfield, CO Dec 2019 to Present**

**Sr Software Engineer**

* Developed and tested many features for dashboard using Python, Django and JavaScript. Wrote and executed various MySQL database queries from python using Python-MySQL connector and MySQL dB package. Analysis and Design of applications.
* Designed and developed End-to-End system test automation solutions in Python to test the CDN (Content Delivery Network) – Caching Features. Worked with millions of database records daily, finding common errors and bad data patterns and fixing them.
* Automated the process of testing a new approach for distribution of control objects to the CDN that allows all resources to be gradually deployed in stages to the servers implementing a large network. Implemented marshalling and UN marshalling XML to HTML and HTML to XML. Worked on RUP development environment and used Rational ClearCase for versioning.
* Implemented responsive user interface and standards throughout the development and maintenance of the website using the HTML, CSS, JavaScript, Bootstrap, jQuery. Designed and maintained databases using Python and developed Python based API (RESTful Web Service) using FlaskSQL Alchemy and PostgreSQL.
* Developed the tools using Python Django and used MongoDB for databases. Parsers written in Python for extracting useful data from the design data base. Used Parse kit (Enigma.io) framework for writing Parsers for ETL extraction.
* Extensively worked with spark Data frames for ingesting data from flat files into RDD&#39;s to transform unstructured data and structured data. Developed Wrapper in Python for instantiating multi-threaded application.
* Worked on MongoDB database concepts such as locking, transactions, indexes, Sharding, replication, schema design. Developed various API’s for Django applications using Django-tasty pie. Used JIRA to build an environment for development.
* Creating RESTful web services for Catalog and Pricing with Django MVT, MySQL, and MongoDB. Developed entire frontend and backend modules using Python on Django Web Framework by implementing MVC architecture.
* Implemented a continuous Delivery Pipeline with Jenkins and GitHub to build a new Docker container automatically, taken part in entire life cycle of the projects including Design, Development, and Deployment, Testing and Implementation and support.
* Used Agile practices and Test-Driven Development (TDD) techniques to provide reliable output by planning and estimating work. Developed Golang API and chat-bot using TDD to automate software deployments and rollbacks. Deployed and monitored scalable infrastructure on Amazon web services (AWS).
* Fixed bugs, providing production support, enhanced applications by improving code reuse and performance by making effective use of various design patterns. Front-end web development using HTML/CSS, JQuery, Bootstrap as well as back-end development using Golang and SQL.
* Used BitBucket as a version control tool to maintain and review peers designs and code within a repository. Created PDF reports using Golang and XML documents to send it to all customers at the end of month with international language support.
* Used Docker to implement a high-level API to provide lightweight containers that run processes isolation and worked on creation of customized Docker container images, tagged and pushed the images to the Docker repository.
* Developed solid understanding of RESTful API’s and HTTP family protocols and status codes. Hands-on experience in writing and reviewing requirements, architecture documents, test plans, design documents, quality analysis and audits Celery with RabbitMQ, MySQL, Django, and Flask to create a distributed worker framework.
* Experience with Bug tracking software (BugDB), continuous integration and build systems such as Jenkins. Designed RESTful XML web service for handling AJAX requests. Work closely with development teams to integrate their projects into the production AWS environment and ensure their ongoing support.
* Worked with peers in Development, and stakeholders in Architecture and Engineering teams, to ensure requirements and designs meet expectations. Refactored existing project to make it more RESTful and thread-safe.
* Developed test strategies to measure non-functional metrics such as throughput, capacity, latency etc. Created project designs utilizing MVC architecture components. Worked in development of applications especially in UNIX environment and familiar with all of its commands. Contributed source code in Golang to developing an automation framework for AWS CFN.

**Environment:** Python 2.7, Pytest, Nginx, BitBucket, Agile, JIRA, Linux, Jenkins, Pychar

**Gogo Business Aviation, Broomfield, CO Aug 2018 to Dec 2019**

**Software Engineer.**

* Involved in whole SDLC (Software Development Life Cycle) process by doing Smoke, Functional, Regression, System, Integration, and User acceptance testing development and tracking them till they are fixed, used PHP to develop website functionality.
* Rewrite existing Java application in Python module to deliver certain format of data, Wrote Python scripts to parse XML documents and load the data in database. Utilized PyQt to provide GUI for the user to create, modify and view reports based on client data.
* Used PyQt for the functionality filtering of columns helping customers to effectively view their transactions and statements. Implemented navigation rules for the application and page outcomes, written controllers using annotations. Developed monitoring and notification tools using Python.
* Author test cases for testing new and existing product features based on delivered flows. Involved in writing application-level code to interact with APIs, Web Serving using AJAX, JSON, and XML. Maintain and monitor nightly automated Regressions.
* Used Python based GUI components for the front-end functionality such as selection criteria. Actively participated in System Testing, production support and maintenance/patch deployments. Created PyUnit test scripts and used for unit testing.
* Performed Data driven testing through Pytest to validate the components displayed on the website using Selenium WebDriver. Used several Python libraries like NumPy, Pandas and Matplotlib. Coding in LAMP (Linux, Apache, MySQL, and PHP) environment.
* Contribute to building in-house Python-based automation framework. Developed GUI HTML, XHTML, AJAX, CSS and JavaScript (JQuery). Built application logic using Python, used the Django Framework to develop the application.
* Used JQuery for selecting particular DOM elements when parsing HTML. Added the navigations and paginations and filtering columns and adding and removing the desired columns for view utilizing Python based GUI components.
* Developed and expanded Python-based automation tools. Description Bluetooth enabled camcorder Embedded in a headset to enable hands-free audio and video recording with optical zoom capability. Used Django APIs for database access.
* Developed automation APIs and device abstraction layer software. Created Data tables to display customer information and add, delete, update customer records using Python, MySQL and XHTML. Written queries in HQL and Native SQL and criteria API.
* Exercised strong troubleshooting skills while also fixing and reporting key automation framework issues. Participated in requirement gathering and worked closely with the architect in designing and modeling.
* Revealed core stability issues with Gogo UCS product, by designing ingenious automated scenarios. Developed SQL Queries, Stored Procedures, and Triggers Using Oracle 9i SQL, PL/SQL. Developed test cases using Python unit test, pylint and nose.

**Environment:** Python 2.7, Sqlite, Pytest, Docker, GIT, Agile, VersionOne, Linux, Jenkins, Pycharm.

**Dealertrack, New Hyde Park, NY Apr 2015 to Jul 2018**

**Python Developer**

* Involved in software development life cycle (Agile) process of tracking the systems Requirements, Gathering, Analysis, Detail Design, Development, System Testing and User Acceptance Testing.
* Designed and developed components using Python. Implemented code in Python to retrieve and manipulated data. Re-engineered various modules for implementing changes and creating efficient system.
* Worked on developing the web application that uses Python on Django web framework pattern. Managed large datasets using Panda data frames and MySQL and creating efficient system. Developed widgets for GUI using PyGtk modules of python.
* Built Models, Views, Serializers, Mappers, Functions, reusable code and libraries required for the application. Designed and Developed UI using HTML, XHTML, AJAX, Java Script and jQuery. Using Restful APIs to access data from different suppliers.
* Used GIT as a version control tool to maintain the code. Used Java Script libraries like jQuery UI, DataGrid, jscolor, high charts. Developed the presentation layer HTML, JSP, CSS and DHTML.
* Used Splunk for searching, monitoring and analysing the error logs and other query logs. Used MySQL as backend database and MySQL dB of python as database connector to interact with MySQL server.
* Used SQL Alchemy as object relational mapper to interact with the database. Helped with the migration from the old server to Jira database with Python scripts for transferring and verifying the information.
* Worked with Django REST Framework to make the application extensible and flexible. Used Postman to test responses of the APIs created using the REST framework. Used Django to develop web-based application and deploy it using Jenkins.
* Worked with Python unit test framework (PyUnit) for testing the functionality of the application and mock python library to mock the functions and API’s for testing. Developed and executed User Acceptance Testing portion of test plan.
* Utilized python debugger (PDB) to set breakpoints and debug the code. Used Python and Django for creating graphics, XML processing of documents, data exchange and business logic implementation between servers
* Experience in build, deploy and continuous integration process with Jenkins and Docker. Used RAD 7.0 for implementing Static and Dynamic web services for consuming and providing services related to the business.
* Used Oracle as database for this application and ReactJS framework for developing the Front-end. Supported Apache Tomcat Web server on Linux Platform.

**Environment:** Python 3.6, Django, Orac le, SQL Developer, Docker, SQL Alchemy, PyUnit, Pycharm, GIT, Agile, Rally, Postman, Mock, Splunk, PDB, REST API’s, MongoDB, Pycharm.

**Capgemini, Hyderabad, India July 2013 to Dec 2014**

**Software Engineer**

* Developed user interface using Spring MVC using JSP 2.0, AJAX and HTML.
* Used HTTP/HTTPS Services extensively to interact with WebServices using JAX-RPC and JAX-WS for data communication.
* Used SAX for XML parsing, JSON and AJAX to send request to secured web service.
* Involved in development, performance testing & defects fixing.
* Implemented Restful web services in java with JAX-RS reference implementation Jersey.
* Used the Rest Client for testing the Restful web services.
* SOAP-UI was used extensively for testing of WebServices across all environments.
* Applications are deployed in the WebLogic Server.
* Involved in Code Reviews so as to implement coding standards for the entire project.
* Designed layouts on the front-end using HTML, CSS3, JavaScript
* Utilized HTML5, CSS3, JavaScript, and JQuery to solve problems like auto completion and client-side validation.

**Environment:** Java, J2EE, Spring, Hibernate Eclipse, SOAP Axis 2 UI, WSDL, XML, JAX-WS (SOAP), JAX-RPC, JSON, WebLogic, JQuery, AJAX, JavaScript, SVN, Windows.