Purnesh Anugolu

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**PROFESSIONAL SUMMARY**

* Over all 9+ years of experience as a Software Developer with profound comprehension of innovation patterns with ability in the center of complex technologies. Strong involvement with Analysis,
* Design and Development, Testing, Implementation, creation backing and support of different Web Applications utilizing **Python, Django.**
* Experienced in creating Web Services with **Python programming language**, Web development utilizing **HTML4/5, CSS/CSS3, JavaScript, JQuery, AngularJS, AJAX, XML, and JSON.**
* Used **Python** with **OpenStack, OpenERP (now ODOO), SQLAlchemy, Django CMS.**
* Excellent experience with **Requests, NumPy, Matplotlib, SciPy, PySpark** and **Pandas** python libraries during development lifecycle and experience in developing API's for the application using **Python, Django, MongoDB, Express, ReactJS, and NodeJS.**
* Building data pipelines for ETL jobs using the **Apache Airflow** workflows by using the DAGs of tasks.
* Experience in developing and processing vast amounts of BigData using Spark, auto scaling the environment using **Amazon EMR**.
* Experience in developing serverless data integration service for machine learning and analytics and monitoring workflows using **Amazon Glue** and **AWS Lambda**.
* **Worked with varieties of Relational Databases (RDBMS) like SQLite, MySQL and PostgreSQL and NoSQL DBs like MongoDB and Cassandra.**
* Worked on various **micro web applications** development using **Flask** and **SQLAlchemy.**
* Experience in data analysis and machine learning techniques with hands-on-experience in various python libraries like **NumPy, Pandas, SciPy.**
* Experience in **Object Oriented Design** and Programming concepts.
* Ensure data integrity and data security on AWS technology by implementing AWS best practices.
* Knowledge about setting up **Python REST API Framework** using **Django.**
* Good knowledge of **SQLite, MySQL, MSSQL, Cassandra databases** with Python.
* Good experience in developing **web applications** implementing Model View Control architecture using **Django, Flask, Pyramid** and **Zope Python web application frameworks**.
* Experience in working with various Python Integrated Development Environments like **NetBeans, PyCharm, PyScripter, Spyder, PyStudio, PyDev and Sublime Text.**
* Experience with **Design, code**, and **debug operations, reporting, data analysis** and **web applications utilizing Python**.
* Familiar with **JSON** based **REST Web services** and **Amazon Web services.**
* Schedule bash tasks and monitor workflows using Apache **Airflow**.
* Developing ML models for detecting anomalies in the telemetry data and forecasting using Pyspark and **Pytorch**
* Used all **major ETL transformations** to load the tables through **Informatica mappings**.
* Strong experience in **Big data, BigData Integration** and **Analytics technologies including Apache Spark, Hadoop, Kafka, Storm**
* Good Experience with **Django, a high-level Python Web framework**.
* Working experience in UNIX and Linux shell environments using command line utilities.
* Excellent interpersonal and communication skills, the ability to provide solutions from a functional and technical perspective, meet deadlines, quickly build client rapport and be a team player.
* Proficient in writing unit testing code using Unit Test/PyTest and integrating the test code with the build process.

**EDUCATION**

Indian Institute of Space Science and Technology, Trivandrum IND — B.Tech in ECE - July’11 - Apr’15

University of New Mexico -- MS in Computer Science -- Aug’18 - May’20

Achievements & Publications

* InderScience: Controller design for Integrated Network Security Systems Novel Architecture for Enterprises to mitigate malicious activity analyzing traffic (IEEE) 2018.
* Complete fee waiver at IIST and Amigo Scholarship at UNM.

**TECHNICAL SKILLS**

| **Programming Languages** | Python,JavaScript, TypeScript, Java, Go, C++, C#, Bash, UNIX, Haskell, Ansible |
| --- | --- |
| **Cloud Big Data** | Apache Airflow, AWS Glue, AWS EMR, Databricks, Azure Data Factory |
| **Big Data Technologies** | Hadoop, Map Reduce and Pyspark |
| **Frameworks** | Django,Flask,Web2py,Spark,Pyramid,CherryPy,TurboGears,AngularJS,NodeJS, FastAPI,Tornado, Express, SpringBoot, Kafka, RabbitMQ, Nginx |
| **Python Libraries** | NumPy,Pandas,TensorFlow,Pytroch,Keras, |
| **Web Technologies** | HTML/HTML5, CSS/CSS3, JSON |
| **Databases** | MySQL, SQLServer, NoSQL, MongoDB,SAS,DB2,TimescaleDB, Postgres, MariaDB, Cassandra, GraphQL, Neo4J, Redis |
| **Web servers** | Apache, WebSphere, Apache Tomcat |
| **Cloud and DevOps Tools** | Jenkins,Git,Chef,Terraform,CfnDsl,ServerSpec,AWS OpsWorks,Containerization(Docker, Kubernetes) |
| **IDE** | NetBeans,AndroidStudio,PyCharm,Eclipse |
| **Versioning Tools** | GIT, SVN |
| **Software packages** | MS Word, Advanced MS Excel, MS PowerPoint, SQL Plus |
| **Reporting Tools** | SSRS, Tableau, MS-Word, and MS-PowerPoint. |
| **Operating systems** | Linux/Unix, Windows Variants |
| **Frontend** | React, Redux,AngularJS,NPM,Bootstrap,SCSS,Webpack,Grunt,Gulp,D3 |
| **Containerization** | Docker, Docker-Swarm, Kubernetes, Helm Charts, Terraform, Camuda |
| **Cloud Platforms** | AWS(EC2, S3, EBS, Lambda, RDS, DynamoDB, CloudFront,SQS,SNS,Kinesis GCP(BigQuery, Dataflow), Azure(DataFactory, Databricks, DevOps) |
| **Big Data Technologies** | Hadoop, Map Reduce and Pyspark |

**PROFESSIONAL EXPERIENCE:**

**SouthWest Airlines, Dallas, Tx Aug’ 23 – Present  
Role: Senior Software Engineer**

* Worked on a modernization effort to move a mission-critical business capability to the Cloud. We are projected to save the company **$100 million annually** and will improve the company's operational performance while simultaneously enhancing customer experience.
* Designed, Implemented, and Deployed scalable solutions to meet business needs.
* Upheld engineering best practices, while ensuring maximized performance and durability.
* Leveraged Confluent **Kafka** and AWS Kinesis for data streaming, **AWS Lambda** for data transformations, **AWS DynamoDB** for data storage, **AWS SQS** for component de-coupling, API Gateway to publicize functionality, and CloudWatch Events for scheduled business logic.
* Built Deployment Pipelines (CI/CD) on GitLab for Production, QA, and Dev environments.
* Served as a champion for CI/CD internal tooling and provided guidance/demonstrations to associates.
* Used Docker for local development and manual deployments to dev.
* Collaborated with upstream/downstream teams to clarify business objectives, solidify data contracts, and commit to timelines for needed deliverables.
* Built easy-to-understand Grafana dashboards to relay system health/activity to business users, as well as L1 and L2 support.
* Programming Languages: **Python**, Java, NodeJS

**84.51° Kroger, Cincinnati, OH May’ 21 – Aug’23  
Role: Senior Data Engineer**

* Worked in the P&LS (Personalization and Loyalty Services) team for the migration of deprecating SAS environments to **Azure Data Factory** pipelines.
* Orchestration of **ETL** services to scale out data integration and transformation, which involves development of Data Pipelines leveraging the linked services that triggers **Databricks** Notebooks.
* Development of **PySpark** jobs and the Notebooks for various internal business requirements that involves identifying the required fields to run parallel activities.
* Internal Python package development hosted on artifactory consumed by multiple teams across the organization.
* Test driven development by writing the **Unit Tests** for functionality added to the python packages for validating all use cases.
* Development of **AirFlow** **DAGs** for migrating the data from Azure to On-prem(Oracle DB) and also hosting and deploying the services in the internal usage.
* Development of **Hadoop Sqoop** jobs for migrating data from On-Prem to Azure.
* Modifications to the existing **Terraform** scripts for provisioning containers that can host and leverage some of the Azure services.
* Implemented & Managed the Continuous Integration/Deployment pipeline using **TeamCity** & Azure pipelines.
* Good knowledge of business process analysis and design, re - engineering, cost control, capacity planning, performance measurement and quality.
* Implemented various frameworks like Data Quality Analysis, Data Governance, Data Trending, Data Validation and Data Profiling with the help of technologies like Big Data,Datastage, Spark, Python, Mainframe with databases like DB2, Oracle, Hive & Snowflakes
* ETL data from sources Systems to Azure Data Storage services using a combination of Azure Data factory, T-SQL, Spark SQL, and U-SQL Azure Data Lake Analytics. Data ingestion to one or more Azure services (Azure Data Lake, Azure Storage, Azure SQL, Azure DW) and processing the data in Azure Databricks
* Extensive experience on Data analytics for satisfying Marketing Campaign.
* Involved in loading and transforming large sets of structured and semi structured data from multiple data sources to Raw Data Zone (**HDFS**) using Sqoop imports and Spark jobs.
* Optimizing the computation and run time of jobs efficiently by scaling the allocations along with storing and retrieving the data from large datasets from Data Lakes in parquet files format.

**Cisco Systems, Boston, MA May ’20 – May’21**

**Sr. Python Developer**

**Responsibilities:**

* Designed front end and backend of the application utilizing Python on Django Web Framework. Develop buyer-based highlights and applications utilizing Python and **Django** in test driven development and pair-based programming.
* Building data pipelines for ETL jobs using the **Apache Airflow** workflows by using the DAGs of tasks.
* Experience in developing and processing vast amounts of BigData using Spark, auto scaling the environment using **Amazon EMR**.
* Experience in developing serverless data integration service for machine learning and analytics and monitoring workflows using **Amazon Glue** and **AWS Lambda**.
* Good involvement with creating web applications and actualizing Model View Control (MVC) design utilizing worker side applications like Django and Flask.
* Developed and tested websites using MEAN (MongoDB, Express, AngularJS, Node.js) stack.
* Developed and tried numerous highlights for dashboard utilizing Python, Bootstrap, CSS,JavaScript and JQuery.
* Created intuitive information diagrams on web application utilizing High outlines JavaScript library with information originating from Apache Cassandra.
* Worked on various micro web applications development using Flask and SQLAlchemy.
* Working on a project to automate SAS applications relating to calculation of earnings at risk. Provided design, development, implementation, documentation, validation and testing support for the business process, system requirements and functionalities needed.
* Model was completely developed in Pyspark. Created pyspark function for each SAS macro as a replica.
* Created Terraform contents for EC2 cases, Elastic Load balancers and S3 containers. Actualized Terraform to deal with the AWS framework and oversaw workers utilizing design of the board instruments like Chef and Ansible.
* Wrote ANSIBLE Playbooks with Python, SSH as the Wrapper to Manage Configurations of AWS Nodes and Test Playbooks on AWS occasions utilizing Python. Run Ansible Scripts to arrange Dev workers.
* Worked on frontend structures like CSS Bootstrap for advancement of Web application.
* Worked in MySQL database on straightforward inquiries and composing Stored Procedures for standardization and denormalization.
* Extensively worked on Shell scripts for running SAS programs in batch mode on UNIX.
* Dealt with data ambiguity and performed lazy evaluation in pyspark for code optimization.
* Developed an ETL administration that searches for the documents in the worker and updates the record into the Kafka line.
* Used Python based GUI parts for the front-end usefulness, for example, determination standards.
* Connected persistent combination framework with GIT rendition control storehouse and consistently works as the registration originated from the engineer.
* Configured Selenium WebDriver, Unit test, Pytest, Robot, pip instrument and made selenium computerization contents in python. Worked with View Sets in Django-REST structure for giving web benefits and expended web administrations performing CRUD activities.
* Used Flask structure for application improvement.
* Designed and actualized a committed MYSQL database worker to drive the webapps and report on everyday progress.
* Coding, testing, debugging, documenting and maintaining SAS and python programs.
* Extensive experience in deploying, managing and developing MongoDB clusters.
* Developed python Script for moving records from dropbox to Amazon worker.
* Consumed outer APIs and composed Restful API utilizing Django REST Framework and AngularJS.
* Developed perspectives and formats with python and Django see regulator and templating language to make an easy-to-understand Website interface.
* Developed inner undertaking in Flask to create reports from Google investigation on day by day, month to month and week by week premise.
* Executed different MYSQL database inquiries from python utilizing Python-MySQL connector and MySQL dB bundle.
* Developed dynamic communication page on .net MS visual essential 2014, utilizing SQL designer devices.
* Used Python Library Beautiful Soup 4 for Web Scraping to separate information for building diagrams.
* Worked being developed of utilizations particularly in UNIX condition and acquainted with every one of its orders.

**Environment:** Python 3.4, 3.3, 2.7, Django1.7, Java 1.7, SQL, Aurora, Java Script, Linux, Shell Scripting, MongoDB HTML, MongoDB, Angular JS, Eclipse JQuery, Kubernetes, Ansible, JSON, XML, CSS, PySpark, MySQL, Bootstrap, Amazon s3, AWS.

**SIPI TCU ICMARS Project, ABQ May ’19 – Aug ’19**

**Role: Sr. Python Developer**

**Responsibilities:**

* Worked on development of customer support and complaints registration system.
* Migrated the application from Python 2.6 to Python 3.4. Corrected the syntax, used fully qualified names, removed and replaced deprecated functions and modules.
* Coding and execution of scripts in Python/Unix
* Recording of Scripts (Web, Web Services HTML) using VUGen and SoapUI and script validation through co correlations, parameterizations and other methods. Scripting - web and web services Data set up using SQL/ORACLE/Teradata.
* Creating RESTful web services for Catalog and Pricing with Django MVT, MySQL, and MongoDB.
* In-Depth understanding of Spark Architecture including Spark Core, Spark SQL, Data Frames, Spark Streaming with PySpark and PANDA library.
* Good experience in developing **web applications** implementing Model View Control architecture using **Django, Flask, Pyramid** and **Zope Python web application frameworks**.
* Resolving Complexity in the scripts of the website due to the complex logic and correlations
* Script validation sometimes becomes challenging as it demands many web-based logics rather than correlation and parameterization.
* Building scenario analysis using time series plots in SAS Visual Analytics.
* Worked on MongoDB database concepts such as locking, transactions, indexes, Sharding, replication, schema design.
* Running load/endurance tests using VUGen, ALM and controller, server monitoring, analysis using Dynatrace, UNIX putty, SQL logs and other tools and reporting the performance. Analyzing errors and exceptions using putty logs (UNIX), etc.
* Implemented Spark using PySpark libraries for faster testing and processing of data.
* Testing in Citrix protocol with scripts and scenario Execution of batch jobs in Control M, Perfmon and other tools Scripting and validation of scripts through correlation, parameterization and web-based logic testing (Smoke test, Load test, Endurance) using Controller for a duration further analysis, checking response times, CPU utilizations, memory leaks of servers and other performance characteristics of the website through capturing Perfmon logs and creating PAPAL reports and creating test reports.

**Environment:** Python2.6/3.4, Django, Django-CMS, SSO, VUGen, SoapUI,SQL,Oracle,Teradata,PySpark, UNIX putty, SQL logs,MongoDB, JavaScript, HTML5, CSS3, Agile, JavaScript, Eclipse, WebLogic, Git, GitHub, Junit,UML, JSP, Xml.

**Qvantel Oy at Melvault, Hyd - IND & Helsinki, Finland July ’17 – Aug ’18**

**ROLE: Python Developer**

**Responsibilities:**

* Used Python with different libraries like matplotlib for diagrams and charts, MySQL dB for database availability, Python - twitter, PySide, Pickle, Pandas information outline, arrange, urllib2.
* Developed an inserted programming information driven test robotization system in Linux/Python. Planned experiments and composed test plans.
* Used Python with OpenStack, OpenERP (presently ODOO), SQLAlchemy, DJango CMS and so forth.
* Provide group direction from dexterous experience/learning and everyday help to the scrum group.
* Configured SiteMinder web operators, Affiliate specialists and RADIUS operators to give organization of web administrations in the SSO condition.
* Developed site dependent on Django CMS.
* Responsible for social event necessities, framework examination, plan, improvement, testing and organization.
* Developed devices utilizing Python, Shell scripting, XML to mechanize a portion of the modest errands. Interfacing with chiefs, specialists, frameworks overseers and creation to guarantee creation cutoff times are met.
* Developed Business Logic utilizing Python on Django Web Framework.
* Developed perspectives and formats with Python and Django's view regulator and templating language to make an easy-to-use site interface.
* Used Django Database API's to get to database objects.
* Used PandsasPI to put the data as time series and tabular format for local timestamp data manipulation and retrieval and storing it into MongoDB.
* Used JQuery and Ajax calls for communicating JSON information questions among frontend and regulators.
* Involved in building database Model, APIs and Views using Python, to assemble an intuitive electronic arrangement.
* Used Python based GUI parts for the front-end usefulness, for example, determination rules,
* Created test tackle to empower far reaching testing using Python.
* Experience in utilizing SAS Procedures, Macros, and other SAS applications for data extraction, data cleansing, data loading and reporting.
* Used Amazon Web Services (AWS) for improved effectiveness of capacity and quick access.
* Added support for Amazon AWS S3 and RDS to have static/media documents and the database into Amazon Cloud.
* Involved in front end and used Bootstrap and Angular.js for page structure.
* Created Data tables using PyQt to show client and strategy data and include, erase, update client records
* Used PyQuery for choosing specific DOM components while parsing HTML.
* Used Wireshark, live http headers, and Fiddler investigating intermediary to troubleshoot the Flash article and help the designer make a practical segment.
* Used Pandas API to put the information as time arrangement and even organization for east timestamp information control and recovery.
* Having awesome involvement in BIG DATA
* Used Python programming and Django for the backend development, Bootstrap and Angular for frontend connectivity and MongoDB for database.
* Created Business Logic utilizing Python to make Planning and Tracking capacities
* Created UI Screens for commencement and approval.
* Worked on UI utilizing HTML5, CSS3 and Java Scripts.
* Developed multi-strung independent applications in Python and PHP to see execution.
* Used Pandas library for measurable Analysis.
* Developed apparatuses utilizing Python, Shell scripting, XML to mechanize a portion of the humble undertakings.
* Developed a completely mechanized nonstop coordination framework utilizing Git, Gerrit, Jenkins, MySQL and custom instruments created in Python and Bash.
* Working in group of Architects and Developers to construct and send Python Flask Peewee Linux AWS.
* Version control utilizing GitHub.
* Involved recorded as a hard copy put away techniques utilizing MySQL.
* Interfacing with managers, craftsmen, frameworks chairmen and creation to guarantee creation cutoff times are met.

**Environment:** Python, Django, Django-CMS, SSO, database access, Django-CMS plugins, Bootstrap, JavaScript, HTML5, MongoDB, CSS3, Agile,PySpark, JavaScript, Eclipse, WebLogic, Git, GitHub, Junit, Agile, UML, JSP, Xml, SOA

**Script Bees IT Pvt Ltd, Hyderabad India May ’15 – July ’17**

**Role: Python Developer**

**Responsibilities:**

* Involved in analysis, specification, design, and implementation and testing phases of Software Development Life Cycle (SDLC) and used agile methodology for developing applications.
* Used Django configuration to manage URLs and application parameters.
* Generated Python Django Forms to record data of online users
* Used Python and Django creating graphics, XML processing, data exchange and business logic implementation
* Used Python based GUI components for the front-end functionality such as selection criteria.
* Designed and developed the UI of the website using HTML, XHTML, AJAX, CSS and JavaScript.
* Deployed Microservices, including provisioning AWS environments using Ansible Playbooks.
* Also used Bootstrap as a mechanism to manage and organize the html page layout.
* Used Django configuration to manage URLs and application parameters.
* Extracting data from the database using SAS/Access, SAS SQL procedures and creating SAS data sets.
* Analyzed the SQL scripts and designed solutions to implement using PySpark.
* Worked with Requests, Numpy, Scipy, Matplotlib, and Pandas python libraries during development lifecycle.
* Added support for Amazon AWS S3 and RDS to host static/media files and the database into Amazon Cloud.
* Use of Python Frameworks for data analysis including Sqlalchemy.
* with Amazon EC2 to deploy projects into AWS and good experience with AWS storage services (S3).
* Wrote scripts in Python for automation of testing jobs.
* Developed Restful Microservices using Flask and Django and deployed on AWS servers using EBS and EC2.
* Deployment and Build of various environments including Linux and UNIX
* Installed and maintained web servers Tomcat and Apache HTTP (1.3, 2.2) Web servers in Red Hat Linux.
* Used web services for integration and testing.
* Implemented CSV file load processes in Oracle in PySpark by using Panda libraries.
* Jira is used as project management tool for issue tracking
* Used HTML, CSS, JQuery, JSON and JavaScript for front end applications.
* Involved in development of Web Services using SOAP for sending and getting data from the external interface in the XML format.
* Worked in an agile development environment

**Environment:** Python, Django 1.4, HTML, CSS, AJAX, Tomcat, Apache HTTP, Angular.js, Pyspark,AWS, JSON, Restful, XML, JavaScript, Shell Scripting, GITHub, MYSQL, Cassandra, JIRA.

**ISRO, Thiruvananthapuram, India Dec’ 14 – May ‘15  
Role: Network Security Researcher**

* Software development and design of a centralized controller for Integrated Enterprise Network Security.
* The controller has to initially separate benign and malicious traffic which eventually detects and mitigates threats including botnets. These techniques were also able to detect powerful botnets like Stuxnet, Duqu and Zues.
* Apart from controllers, all the agents in the entire network will be incorporated with some intelligence to work more efficiently compared to ancient firewalls.

**IIST, Thiruvananthapuram, India April ’14 – July ‘14  
Role: Research Intern – Developing mobility models for nodes in a DTN**

* Developed movement models for mobile nodes in Delay Tolerant Networks.
* Though DTNs are usually visualized in space communication activities, they tried to implement such disrupted networks on Vehicular Ad Hoc MANETs and developed an architecture for the movement of its nodes.
* Developed a python-based simulator converting the road network of an Indian city using geographical coordinates to graph network to visualize the environment.
* Proposed a new architecture for the movement of nodes in a very large network.