 **Prem Pavuluri**

**Sr. Python Full Stack Developer**

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| Professional Summary: |

* Extensive 11 years of professional experience in Software Development Life Cycle (SDLC), including design, implementation, integration, maintenance, and testing of various web – based, Enterprise, Client/Server and Distributed applications using Python, Django, Flask, Pytorch and Node.js, Angular.js, DOJO, jQuery etc.
* Extensive experience in full life cycle (SDLC) of software development and in Agile Methodology and Scrum meetings.
* Worked on various micro web applications development using Flask and SQL Alchemy.
* Experience in data analysis and machine learning techniques with hands-on-experience on various python libraries like NumPy, Pandas, SciPy.
* Proficient on User Interface in developing web applications using HTML5, CSS3, JavaScript, Angular 2, Node.JS, Angular.JS, ES6, Typescript, JSON, XML, jQuery.
* Extensive experience in writing SQL, PL/SQL and Stored Procedures for accessing and managing databases queries with Oracle, MySQL, NoSQL, MongoDB, SQL Server, and react
* 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.
* Experience on various Python packages such as NumPy, SQL Alchemy, Beautiful soup, pickle, Pyside, Pymongo, SciPy, PyTables.
* Experienced in developing web-based applications using Python, Django, XML, CSS, HTML, DHTML, JavaScript, Bootstrap, and jQuery.
* Experienced in NoSQL technologies like MongoDB, Redis and Cassandra and relational databases like SQLite, PostgreSQL, Dynamo DB, MariaDB and MySQL databases.
* Experienced in Django, Python web frameworks, Object Oriented programming (OOPS) concepts using python and Django.
* Experienced with various Python Integrated Development Environments like Eclipse, PyCharm, Atom, Pydev, IDLE
* Experienced in working with Python ORM Libraries including ask, Django ORM.
* Experienced with modern build tool chains, like JavaScript frameworks/technologies such as Express.js, Angular.js, React.js, MobX or Flux.js.
* Excellent understanding of TDD Test-driven development, Software Development Life Cycle (SDLC) methodologies like Agile and Scrum. Used CI/CD, Jenkins as part of the daily build.
* Excellent communicational skills and strong interpersonal skills, including the ability to coordinate and motivate team Members.
* Experience in bucketing, partitioning, multi-threading computing and streaming (Python, PySpark).
* Experienced in using various Python libraries (Beautiful Soup, NumPy, SciPy, matplotlib, python-Pandas, MySQL DB for database connectivity).
* Experience in building end to end data science solutions using R, Python, SQL and Tableau by leveraging machine learning based algorithms, Statistical Modelling, Data Mining and Data Visualization.
* Experienced in developing web-based applications using Python, Django, XML, CSS, HTML, DHTML, JavaScript, jQuery, Angular Versions.
* Experience in using Design Patterns such as MVC, Singleton and frameworks such as DJANGO.
* Experienced in working with Angular concepts like Directives, Components, Router, Data Binding, Reactive Forms, Form Validations, pipes and Services.
* Experience in configuration management tools such as Ansible, Chef and Puppet.
* Experience in Implementation of MVC architecture using Spring MVC, SOAPUI and SOAP web service.
* Utilizing AWS services such as Elastic Beanstalk, EC2, Lambda, and S3 for deploying, hosting, and scaling web applications.
* Utilizing Azure Kubernetes Service (AKS) for orchestrating containerized applications and managing Kubernetes clusters

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| Technical Skills: |

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| **Web Technologies/Frameworks** | Reactjs, Angularjs, HTML, Java script, jQuery, bootstrap, XML / Django, Pyjamas, Flask, Pyramid, NodeJS, Spring, CSS, Bootstrap. |
| **Cloud Platforms** | Microsoft Azure, AWS |
| **Testing Tools/Operating Systems** | Selenium, PYtest, Robot framework / Unix, Linux, macOS, Windows(7/8/10/XP) |
| **Version Control** | CVS, Git, GitHub. |
| **Data Base** | Oracle, MySQL, PostgreSQL, Apache, MongoDB |
| **Front End/Web Server** | Angular, jQuery, Ajax, NodeJS, JSON, Bootstrap, CSS, HTML / Apache Tomcat, Web Logic, Apache Cassandra |
| **SDLC** | Agile Methodologies, Scrum, Kanban, Waterfall |
| **CI/CD Tools** | GIT, SVN, Jenkins, Docker. |

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| Professional Experience |  |

**Client: Centene Corp, St. Louis, MO MAR 2023 – Till Date**

**Role: Sr. Python Developer**

**Project Description:** The Telemedicine Platform project aimed to revolutionize healthcare accessibility by creating a comprehensive telehealth solution. The platform facilitated remote consultations, video calls, and secure sharing of medical records, providing a seamless and secure virtual healthcare experience. Integrated video conferencing features, enabling high-quality and secure real-time consultations between healthcare providers and patients. Developed a secure user authentication and authorization system to protect patient information and control access to sensitive data. Integrated the telemedicine platform with existing Electronic Health Records (EHR) systems to provide healthcare providers with a comprehensive view of patient history during virtual consultations. Implemented analytics features to track and analyze usage patterns, helping healthcare providers optimize their virtual practice and improve patient outcomes. The Telemedicine Platform successfully provided a secure, user-friendly, and scalable solution for remote healthcare services. The platform received positive feedback from healthcare professionals and patients alike, contributing to improved healthcare accessibility and patient care.

**Responsibilities:**

* Developed views and templates with **Python** and **Django's** view controller and templating language to create a user-friendly website interface.
* Developed entire backend modules using Python on **Django** **Web** **Framework**.
* Developed API services in **Python/Tornado** and NodeJS while leveraging AMQP and RabbitMQ for distributed architectures.
* Used **Django** **framework** to develop the application and used **Python** modules for **web** **crawling**.
* Utilized **PyUnit,** the Python Unit test framework, for all Python applications and used Django Database APIs to access database objects.
* Used **object-relational mapping (ORM)** solution, technique of mapping data representation from MVC model to Oracle Relational data model.
* Implemented **Microservices architecture** in developing the web application with the help of Flask framework.
* Worked on several standard Python packages like **NumPy, Matplotlib, SciPy, Pandas and PyTables** etc.
* Designed and implemented a scalable and highly available **data processing pipeline** on **AWS cloud** using **AWS data pipeline** for handling large volumes of data in real-time.
* Developed a Python Script to load the CSV files into the **AWS S3** and created **AWS buckets**, performed folder management in each bucket, managed logs and objects within each bucket.
* Utilized **Sci-kit learn, Pandas, NumPy, and TensorFlow** for data analysis and predictive modeling.
* Worked on **CI**/**CD** **pipeline** and created sandbox, UAT and Production Environments in **AWS** **Cloud** **.**
* Implemented custom python **machine** **learning** **algorithms** and **modified** python open-source algorithms.
* Automated the existing scripts for performance calculations using **NumPy**, **PyCharm** and **SQLAlchemy**.
* Implemented **PyTorch** to automatically classify sleep stages based on single channel.
* Used Maven for building, creating JPA based entity objects and compiling **GWT** and **GXT** application.
* Maintained the Source code using **GIT** in a multi developer environment.
* Developed **Docker** container based **micro** **services** using Spring Boot/Cloud and deployment on **Kubernetes** cluster.
* Developed Jenkins-Kubernetes deployment for **dockerized** **microservices** in **Golang** and **Python**.
* Worked on application development using **MYSQL**, **PL**/**SQL**, **Oracle** **Forms**/**Reports** and **Informatica** **ETL**.
* Used **JIRA, HipChat, Slack, zoom** for project tracking and team communication.
* **Agile/SCRUM** was used as the project management methodology and JIRA and Confluence were the tools used to keep things in check.

**Environment:** Python, Django, PyCharm, PyTorch, Pandas, Flask, Python API, TensorFlow, scikit-learn, NumPy, Microservices, ORM, Celery, Tornado, SQL Alchemy, JavaScript, HTML5, CSS3, Angular, Machine learning, Typescript, MySQL, PL/SQL, Rest, Git, Selenium, Azure cloud, Azure Data factory, Chef, Maven, Jenkins, Docker, Linux, Agile, Scrum, SQL Server.

**Client The Home Depot, Atlanta, GA Sep 2020 – Feb 2023**

**Role: Sr. Python Developer**

**Project Description:** In Product Management Services project, effective management of the product catalog is essential for the success of the online store. A product management service plays a vital role in ensuring this success by handling various aspects of product management. These include organizing the product catalog by creating logical categories, subcategories, and attributes for easy navigation and search. Accurate and up-to-date product information, such as descriptions, specifications, pricing, and images, is also managed by the service, often using specialized tools like product information management systems. Additionally, the service assists in inventory management to avoid stockouts or overstock situations by implementing tracking, defining reorder points, and controlling stock levels.

**Responsibilities:**

* Managed datasets using data frames and **MySQL**, queried MYSQL database queries from python using **Python**-**MySQL** **connector** MySQL dB package to retrieve information.
* Development of **real-time** multi-tasking systems using **Python**.
* Created **data access** modules in python.
* Designed and developed components using **Python** with **Django** **framework**. Implemented code in python to **retrieve** and **manipulate** data. sed Python & Django creating graphics, **XML** processing of documents, data exchange & business logic implementation between servers.
* Worked on development of backend services using **Python**, **SQL**, and **Linux**. Created many **APIs** for project which involves creating and maintaining projects in an organization. **and developed Ul using HTML, CSS,** and **JavaScript.**
* Developed backend **services** and created many **API's** using **Python Programming Language** and **SQL**.
* Performed research regarding **Python Programming** and its uses and **efficiency**.
* Developed **GUI** screens for **XTT** & **LD** application using **JSP**, **HTML** and **CSS**.
* Development **Ul** modules using **HTML**, **JSP**, **JavaScript** and **CSS**.
* Wrote **JavaScript** functions to get **Dynamic** data and **Client**-**side** validation.
* Used **jQuery** to make the frontend components interact with the **JavaScript** functions to add dynamism to the **web** **pages** at the client side.
* Leveraged **PowerBi for** data visualization, inventory tracking and product performance reporting.
* Implemented a **Node**.**js** server to manage **authentication**.
* Created **Node**.**js** middleware application server to encapsulate modern JS widget framework Worked with **JSON** objects and **JavaScript** and **jQuery** intensively to create interactive web pages.
* Implemented web based front-end using **HTML, CSS, jQuery,** and **AngularJS.**
* Involved in developing the **Ul** panels using **JSF, XHTML, CSS,** and **jQuery**.
* Rich Ul development experience and well versed in client-side technologies like AngularJS, JQuery, BackBone.js, Google Widget Toolkit, Sencha Ul.
* Created a Rich Single Page Application using HTML, CSS, Angular JS, jQuery, and REST Services
* Designed and implemented Ul layer using JSP, JavaScript, HTML, DHTML, JSON, XML, XHTML, XSL, XSLT, XSL-FO, and business logic using Servlets, JSP, EJBs and J2EE framework.
* Used Backbonejs, Node.js, Bootstrap and other JavaScript libraries to create intuitive and rich Single Page Applications.
* Developed Dashboard to monitor and report Cache Coherence Servers.
* Utilized Azure Blob Storage for storing product images and other media files, ensuring scalability and high availability
* Implemented Azure SQL Database for managing product data, enabling efficient storage and retrieval of product information
* Integrate the Ext/s/Sencha framework with Oracle BPM.
* Prepared statements are used for communication SQL database.
* Involved in Requirement analysis, design and Implementation applying the Waterfall model.
* Wrote Servlets programming and JSP scripting for the communication between web browser and server.
* Integrate the Oracle BPM with the Spring Framework in the enterprise layer.
* Involved in packaging, deployment, and upgrade of different modules of SAS on JBoss App Server. VB code Analysis and Sybase store procedure converted into SQL.

**Environment:** Python, Django, HTML, CSS, JavaScript, Ajax, JSON, jQuery, MySQL, SQL, DB2, Apache Axis, WSDL, ClearCase, Selenium, Power BI, Waterfall Model, Ant, XML, Jira, Swing, Cognos,Azure.

**Client: Simmons Bank,** [**Pine Bluff, Arkansas**](https://en.wikipedia.org/wiki/Pine_Bluff,_Arkansas) **June 2017 – Aug 2020**

**Role: Python Developer**

**Project Description:** The Automated Investment Advisory platform successfully democratized access to personalized financial advice, empowering users to make informed investment decisions. This project involved creating a user-centric and technologically advanced solution to provide automated investment advice tailored to individual user preferences and financial goals. Its user-friendly interface, backed by robust backend processes and personalized algorithms, garnered positive feedback and increased user engagement.

**Responsibilities:**

* Using Django Rest Framework to create a RESTful API endpoint using View sets, Routers and regular expression-based routing with MySQL Workbench.
* Implemented various functions in NumPy and Pandas for mathematical operations and arrays.
* Using Python and Django Framework to develop the backend of the web application, along with REST API Django Web Framework is included install packets for web applications and settings.
* Developing Django modules and view, with the requirements of MySQL and Oracle 11g Data Management System.
* Utilized Apache Spark with Python to develop and execute Big Data Analytics and Machine learning applications, executed machine Learning use cases under Spark ML and Milib.
* Writing Unit Test with PyUnit to test CRUD operations on the Django RESTful endpoints.
* Worked on different type of Python modules such as NumPy, SciPy, matplotlib which is used in converting legacy algorithms in scripting to python files for next gen elevators.
* Utilized Python specific tools including Django, Django Rest Framework, Django, SQL Alchemy, Pandas and NumPy.
* Worked on Python ORM Libraries including Django ORM and Implemented REST APIs using Python and Django framework.
* Worked on several standard Python packages like NumPy, Matplotlib, SciPy, Pandas and PyTables etc.
* Worked with Requests, NumPy, SciPy, Matplotlib, and Panda’s python libraries during development lifecycle.
* Built various graphs for business decision making using Python matplotlib library.
* Fetched twitter feeds for certain important keyword using python-twitter library.
* Used Python library Beautiful Soup for web scrapping to extract data for building graphs.
* Implement various screens for the frontend using React js and used various predefined components from NPM (Node Package Manager).
* Used Ansible in facilitating continuous delivery pipelines is crucial for maintaining the agility and responsiveness of the Automated Investment Advisory platform
* Developed Restful API's using Python Flask and SQL Alchemy data models and ensured code quality by writing unit tests using Pytest.
* Used Node Package Manager (NPM) to manage or install the Node-JS modules like Grunt, Gulp, and Express.js, mongoose, mongo.js, body-parser, bcrypt.js and socket.io.
* Worked with modules like Mongo DB and mongoose for database persistence using Node.js to interact with MongoDB
* Used Redis for quick retrieval of cached data, significantly reducing database load and query times
* Worked on MongoDB database concepts such as locking, transactions, indexes, Shading, replication, schema design.
* Utilized Document DB for Supporting SQL-like queries with MongoDB-compatible APIs, allowing healthcare applications to perform complex queries on EHR data for analytics, reporting, and patient care management.
* Used Docker to automate the deployment of applications inside as images which can be shipped easily and used anywhere it is required.
* Used REST client and POSTMAN to check the response of various API as a visual documentation for back-end implementation and client-side consumption.
* Used Microservices Docker with Kubernetes interacting through a combination of REST and Apache Kafka message brokers.
* Utilized Pytorch pre-built layers and other utilities for building complex neural networks
* Used Pytorch particularly in identifying irregularities, suspicious activities, and potential fraud within the vast sea of financial data.
* Employing AKS for streamlined management and orchestration of containerized applications within Kubernetes clusters on Azure
* Utilizing various AWS tools for seamless deployment, hosting, and scaling of web applications like Elastic Beanstalk, EC2, Lambda, and S3.
* Used RESTful API to create RESTful Web Services, set JSON data type between front-end and the middle-tier controller.
* Provided service discovery for all microservices using Docker, Kubernetes project.
* Used repository like GIT/GitHub to maintain the version of the files and took the responsibility to do the code merges and creating new branch when new feature implementation starts.
* Involved in installing and configuring Maven for application builds and deployment.
* Setup the CI/CD continuous Integration and continuous Deployment process for the application using the Jenkins.
* Agile/SCRUM was used as the project management methodology and JIRA were the tools used to keep things in check.

**Environment:** Python, Django, Flask, ORM, pandas, Python API, PyTorch, scikit-learn, NumPy, PyCharm, SQL Alchemy, JavaScript, ES6, Angular, TypeScript, Node.js, HTML, CSS, Microservices, Docker,EC2, Lambda, Beanstalk Oracle, Ansible, MongoDB, MySQL, JDBC, Jira, Git, Maven, Rest, SOAP, Webservices, Agile, Scrum, Eclipse, Jenkins, TDD, CI/CD.

**Client: State of Texas, Texas Aug 2015 – May 2017**

**Role: Python Developer**

**Project Description:** Led the development of a robust and user-friendly Electronic Health Records (EHR) system aimed at optimizing healthcare providers' efficiency in managing patient records. Designed and implemented a comprehensive platform that ensures secure storage, seamless retrieval, and efficient management of patient information. The system prioritizes user experience, streamlining data entry, and retrieval processes, ultimately enhancing the overall workflow of

healthcare professionals. Project is industry-leading security measures to safeguard sensitive patient data, ensuring compliance with healthcare regulations.

**Responsibilities:**

* Worked in Agile and scrum environment which includes daily stand up and sprint planning.
* Designed front end using UI, HTML, Bootstrap, Node JS, Angular JS CSS, and JavaScript.
* Developed functions and features and integrated the APIs in AngularJS.
* Created REST architecture with token-based authentication and authorization and for consumers.
* Used Angular Services for consuming REST API and SOAP web services using HTTP libraries.
* Used Python in-built libraries urllib2 and beautiful soup modules for web scraping.
* Worked on front end frameworks like CSS and Bootstrap for development of simple web applications.
* Modify the existing Python/Django modules to deliver certain format of data.
* Successfully migrated the Django database from SQLite to MySQL to PostgreSQL with complete data integrity.
* Developed dynamic web pages using HTML5, CSS3, React JS, Bootstrap, Node.js.
* Worked on the development of applications using Ruby on Rails (RoR) and Jruby.
* Worked on Single page applications using ANGULAR JS, NODE JS, GULP, and WEBPACK (ES6).
* Developed Web Application using AngularJS, HTML5, CSS3, JavaScript, Bootstrap and JSON web token.
* Worked on Installation and configuration of DevOps tool Puppet.
* Unix-based solutions to guarantee platform compatibility and a smooth integration of the EHR system with the current healthcare infrastructure.
* carried out debugging and troubleshooting on Unix-based systems, quickly resolving problems to reduce downtime and preserve uninterrupted service for patients and healthcare providers.
* Created and maintained various DevOps related tools for the team such as provisioning scripts, deployment tools and staged virtual environments.
* Development of Python APIs to dump the array structures in the Processor at the failure point for debugging.
* Developed Junit test cases for unit testing and Mockito for mocking.
* Worked with Agile Software Development environment using SCRUM and Kanban.
* Developed and implemented procedures for transitioning codebase to Git, Gradle, and TDD.
* Used and configured NGINX and Node.js servers for the portal to run on and made them work even for CORS.
* Used Angular to standardize web application structure and responsive using Bootstrap and provide a future template for data binding. Developed Application using web technologies like JavaScript, GitLab and GitHub.
* Created SQL Statement, Stored Procedure, and PL/SQL using Oracle SQL Developer.
* Worked on Mocha package and used chai to use expect method in the unit test cases results on NodeJS.
* Used Angular HTTP to retrieve data through Web API from Entity Framework.
* Used Test driven approach (TDD) for developing services required for the application.
* Used Maven script for building and deploying the application.
* Used Docker plugins to setup Docker containers for build slave for Jenkins.
* Maintained version control of Python by using GIT. (Merge, Branch, Push, and Commit).
* Inform through mail the compilation errors to the responsible team with error logs using JIRA.
* Handling the day-to-day issues and fine tuning the applications for enhanced performance.

**Environment:** Python, Django, Angular JS, HTML5, CSS3, Bootstrap, Node JS, HTTP, PostgreSQL, Maven, Jenkins, GIT, Jira, Agile,Unix.

**Client: People Tech Group, Hyderabad, India JUNE 2012 – MAR 2015**

**Role: Software Engineer**

**Responsibilities:**

* Responsible for gathering requirements, system analysis, design, development, testing and deployment.
* Rewrite existing Python/Django modules to deliver certain format of data.
* Built enterprise-wide DNS historical data trending analysis tools in Go, Languages with REST API for user queries as micro service.
* Developing Spark programs using Python APIs to compare the performance of Spark with Hive and Oracle.
* Used Golang to log the different host system event and alert information to Cassandra database.
* Develop Python microservices with Django/Flask framework for Confidential & Confidential internal Web Applications.
* Consumed the data from Kafka using Apache spark.
* Developed GUI using webapp2 for dynamically displaying the test block documentation and other features of Python code using a web browser.
* Developed a fully automated continuous integration system using Git, Gerrit, MySQL and custom tools developed in Python and Bash.
* Designed RESTful Webservices using FLASK, with emphasis on improved Security for the service using FLASK-HTTP AUTH with HTTPS.
* RedHat cloud computing solutions, edit and manage the creation of relevant content for the OpenShift online channels.
* Developed application logic using Python, Java script, java.
* Wrote Python scripts to parse XML documents and load the data in database.
* Used Wire shark, live http headers, and Fiddler2 debugging proxy to debug the Flash object and help the developer create a functional component.
* Involved in the Continuous Integration of the automation framework with Jenkins with Git/GitHub repository.
* Programmed the invoicing web application using Golang and PostgreSQL as the backend.
* Used Sqoop efficiently transfer data between databases and HDFS and used PySpark to stream the log data from servers.
* Created a Rich Single Page Application using HTML, CSS, JSP, JSON, AngularJS, React.js, Node.js, bootstrap.js, backbone.js.
* Utilized Python in the handling of all hits on Django and other applications.
* Implemented user interface guidelines and standards throughout the development and maintenance of the website using the CSS3, HTML, JavaScript, Angular.js and jQuery.
* Used Query for all client-side JavaScript manipulation.
* Developed entire backend modules using Python on Django Web Framework.
* Development of Python APIs to dump the array structures in the processor at the failure point for debugging.
* Designed and maintained databases using python and developed Python based API using Flask, SQL Alchemy and PostgreSQL.
* Built docker containers to sandbox python WSGI apps.
* Developed web page and form validation with team using AngularJS, Bootstrap, Node.js, HTML, CSS.

**Environment:** Python, Django, webapp2, Wireshark, Fiddler2, Flask, Angular.js, Apache Spark, HTML, CSS3, jQuery, Shell Scripting, JSON, MySQL, Git, Apache and Linux.