

Summary

Software Engineer with experience developing Python applications. Can train and deploy Machine Learning models in Python. Can develop, integrate, and deploy AWS services.

Skills

Languages

Fluent: Python

Intermediate: SQL, Java

Frameworks, API, and Cloud services

Fluent: AWS services: Amplify

Intermediate:

Python: Flask, Django

AWS services: EC2, S3, Simple DB

Databases: MariaDB, MongoDB

Android SDK, Google APIs

Learning:

Machine Learning: Model development with **scikit-learn**, **TensorFlow**, **Keras**. Data representation with **matplotlib**.

AWS: Model Training on Cloud Instances with AWS infrastructure, GAN training with **AWS DeepComposer**

Experience

Open Source Contributions

[scikit-image: Image processing in Python](#)

- Illustrated usage for natural sort algorithm by processing documentation in PR, which was successfully merged into master branch.

Key Projects

Diabetes Prediction

Android app with a Flask backend that performs diabetes prediction with an ensemble of 6 trained machine learning models.

- Designed application architecture from specification documents, which was used to develop detailed Agile based plan for project development.
- Led a team of 4 developers to create UIs and Kotlin backend code, and delivered functionality on a tight deadline.
- Developed and deployed a Flask application to act as an API and serve as the backend for the Android app.
- Developed pipelined architecture for training and serializing 6 models on the Pima Indians diabetes data set, which were then encapsulated into an ensemble and deployed using a Flask based API

Technologies used: Python, Flask, scikit-learn, Android SDK, Pytest

Random Question Paper Generator

Web and Android app with a custom python backend that generates custom Question sets from a very large question bank database.

- Supervised a team of 8 developers to design and develop a web application component, and kept development on track when half the team dropped out.
- Created a python application that connects to a MariaDB instance with 1000s of questions and generates a well-balanced question paper in 3 seconds.
- Optimized the python application and the database instance that reduced processing time by 12 seconds from 15 to 3 seconds, a reduction of 500%.
- Ported the web app to an Android app using WebView, which now eased app use on mobile devices.

Technologies used: Python, SQL, MariaDB, Android SDK, Pytest

Project-Setup

Python application that sets up a custom development environment in seconds.

- Created functionality to store any commands in YAML files, which created a layer of abstraction that allows for language agnostic setup.
- Wrote tests using Pytest for the entire package leading to more than 95% code coverage.
- Developed and documented set of commands for setting up python projects along with CI pipeline, which leads to consistent local workflow across all projects of the organization.

Technologies used: Python, YAML, Pytest

Machine Learning Projects

- Developed models for the following datasets: Pima Indians Diabetes dataset, Boston Housing dataset, Iris flowers dataset.
- Analyzed the StackOverflow 2019 developer survey.

Technologies used: Python, scikit-learn, Tensorflow, Keras, matplotlib, Pytest

Wget Downloader

Python utility that downloads and archives webpages using the wget tool. Designed application architecture to generate layers of abstraction so that only a file with links is required for input, simplifying archival operations. ,

Education

Bachelor of Technology in Computer Science and Engineering, CGPA:9.1/10, 2016-2020, from JIS University, Kolkata.

Certifications in Data Structures with Python, Social Networks, Machine Learning, Data Science, AWS DeepComposer and DBMS from NPTEL and Udacity.