**PYTHON DEVELOPER TECHNICAL SKILLS**

**1. Programming Proficiency**

* **Python: Strong knowledge of Python syntax and features.**
  + **Data Structures: Proficiency in lists, tuples, sets, dictionaries, and strings.**
  + **Control Flow: Understanding of loops, conditional statements, and functions.**
  + **OOP: Object-oriented programming concepts, including classes, inheritance, and polymorphism.**
  + **Error Handling: Proficiency in exception handling using try, except, and finally blocks.**

**2. Web Development Frameworks**

* **Flask: A lightweight web framework for building web applications quickly.**
* **Django: A high-level web framework that encourages rapid development and clean, pragmatic design.**
* **FastAPI: A modern framework for building APIs with Python 3.6+ based on standard Python type hints.**

**3. Data Manipulation and Analysis**

* **Pandas: Library for data manipulation and analysis, providing data structures like DataFrames.**
* **NumPy: Library for numerical computing, providing support for large multidimensional arrays and matrices.**

**4. Database Management**

* **SQL: Proficiency in SQL for querying relational databases (PostgreSQL, MySQL, SQLite).**
* **ORM: Familiarity with Object-Relational Mapping tools like SQLAlchemy or Django ORM for database interactions.**

**5. Version Control and Collaboration**

* **Git: Experience with version control systems like Git for code collaboration and management.**
* **GitHub/GitLab/Bitbucket: Familiarity with platforms for hosting repositories and collaborating on code.**

**6. Testing and Debugging**

* **Unit Testing: Experience with testing frameworks like unittest or pytest for writing test cases.**
* **Debugging: Proficient in debugging code using tools like pdb or IDEs like PyCharm and Visual Studio Code.**

**7. API Development**

* **RESTful APIs: Understanding of how to design and develop RESTful APIs.**
* **GraphQL: Familiarity with building APIs using GraphQL for flexible data querying.**

**8. Frontend Technologies (Optional)**

* **HTML/CSS/JavaScript: Basic knowledge for full-stack development, especially for web applications.**
* **Frontend Frameworks: Familiarity with frameworks like React, Angular, or Vue.js can be beneficial.**

**9. DevOps and Deployment**

* **Docker: Understanding containerization for packaging applications and dependencies.**
* **CI/CD: Familiarity with Continuous Integration/Continuous Deployment practices and tools like Jenkins, Travis CI, or GitHub Actions.**

**10. Cloud Services (Optional)**

* **AWS/GCP/Azure: Basic understanding of cloud services for deploying applications and utilizing cloud databases.**
* **Serverless Computing: Familiarity with AWS Lambda or Google Cloud Functions for serverless architecture.**

**CERTIFICATION FOR PYTHON DEVELOPER**

**1. Python Institute Certifications**

* **PCAP (Certified Associate in Python Programming)**: Validates programming skills in Python.
* **PCEP (Certified Entry-Level Python Programmer)**: Aimed at beginners to validate fundamental programming skills.

**2. Microsoft Certified: Azure Developer Associate**

* Focuses on developing applications and services using Azure, including Python-based solutions.

**3. AWS Certified Developer – Associate**

* Validates proficiency in developing applications on AWS, with an emphasis on serverless and database services.

**4. Django for Everybody Specialization (Coursera - University of Michigan)**

* A series of courses covering Django for web development, including building web applications.

**5. Data Science Professional Certificate (Coursera - IBM)**

* Covers data manipulation, analysis, and visualization using Python, including libraries like Pandas and Matplotlib.

**6. Google IT Automation with Python Professional Certificate**

* Focuses on using Python for automation tasks, including working with files, data analysis, and more.

**7. DataCamp Certificates**

* Various courses covering Python for data science, machine learning, and web development.