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.