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GitHub / Portfolio

PROFESSIONAL SUMMARY

Results-driven Python Developer with 2+ years of experience in designing, developing, and maintaining scalable software solutions. Proven expertise in leveraging Python and associated libraries to build data-driven applications, web interfaces, and automation tools across diverse environments.

- Strong hands-on experience with core Python libraries such as BeautifulSoup, NumPy, SciPy, Pandas, Matplotlib, NetworkX, urllib, and MySQLdb for data manipulation, visualization, and backend integration.
- Skilled in web development using Python (Django/Flask), HTML5, CSS3, JavaScript, jQuery, and AJAX for building responsive, user-centric web applications.
- Proficient in automation and testing using Selenium WebDriver, Pytest, and Python scripting to streamline QA and build robust CI/CD pipelines.
- Deep understanding of multithreading, multiprocessing, concurrency, and TCP/IP socket programming, with experience handling asynchronous workloads using Celery and RabbitMQ.
- Experience working with AWS services including EC2, S3, and SQS, as well as containerized environments using Docker and Kubernetes.
- Solid grasp of Object-Oriented Programming, relational databases (MySQL), and ORM tools like Django ORM and SQLAlchemy.
- Familiar with Big Data tools such as Hive, Pig, HBase, and Sqoop, including data ingestion and export into HDFS and Hive.
- Worked with version control systems like SVN, and implemented CI/CD pipelines using Jenkins, integrating builds via ANT, Maven, and Python.
- Exposure to Hadoop security, Linux system administration, and network protocol configuration (DNS, LDAP, DHCP, SMTP, NFS, HTTP).
- Experienced with embedded Python, custom data structures, and proprietary RTOS environments.
- Adept at troubleshooting, debugging, and performance tuning across multi-layered architectures.
- Developed RESTful APIs and internal tools using Flask and FastAPI, enabling efficient microservice communication and modular backends.
- Contributed to internal Python libraries, improving code reusability and reducing development time across multiple teams.

TECHNICAL SKILL

- **Languages**: Python, R, HTML, CSS, JavaScript
- **Frameworks / Libraries**: Flask, Bootstrap, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
- **Machine Learning**: Supervised & Unsupervised Learning, Reinforcement Learning, Model Evaluation, Data Preprocessing
- **Tools**: Git, GitHub, Postman, MySQL
- **Platforms / IDEs**: VS Code, PyCharm, Jupyter Notebook, Google Colab
- **Soft Skills**: Problem Solving, Team Collaboration, Attention to Detail, Self-learning

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EDUCATION

Anderson University: Anderson, South Carolina, USA
Master of Science in Computer Science, GPA: 3.80   August 2024 – Present

GITAM University   Visakhapatnam, India
Bachelor of Technology in Computer Science, GPA: 3.4   July 2019 – May 2023

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CERTIFICATIONS

Python (Basic) – HackerRank
- Demonstrated proficiency in Python fundamentals, including syntax, loops, and problem-solving skills.

SQL (Basic) – HackerRank
- Certified in SQL basics: SELECT queries, filtering, and simple joins.

Problem Solving (Intermediate) – HackerRank
- Tackled complex challenges using algorithms and data structures efficiently.

AI Internship – Verzeo x Zebo.AI
- Completed a hands-on Artificial Intelligence internship using Python and Scikit-learn for real-time ML applications.

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PROJECTS

Movie Recommendation System (Sentiment-Based)
- Built a movie recommendation engine using NLP and sentiment analysis of user reviews.
- Preprocessed text using tokenization, TF-IDF, and vectorization techniques.
- Implemented logistic regression and achieved ~87% accuracy on sentiment classification.
- Tools used: Python, Flask, Scikit-learn, Pandas, NLTK

Underwater Ore Detection Using Sonic Waves

• Developed an AI system to detect mineral-rich zones underwater using sound wave frequency patterns.

• Trained classification models to distinguish ore signals from background noise.

• Achieved detection accuracy of ~82% in simulated test environments.

• Tools used: Python, Scikit-learn, Matplotlib, NumPy, signal processing libraries.

KNN vs Scikit-learn Performance Comparison

• Compared manual KNN algorithm implementation with Scikit-learn's built-in version.

• Benchmarked accuracy, training time, and scalability on large classification datasets.

• Demonstrated how library-optimized models reduce execution time by 70%.

• Tools used: Python, NumPy, Scikit-learn, Matplotlib.

Portfolio Website (Personal Project)

• Designed and deployed a responsive single-page portfolio using HTML, CSS, and JavaScript.

• Integrated a custom AI chatbot inspired by ChatGPT for interactive engagement.

• Includes sections for About Me, Resume, Certifications, Projects, and Contact Form.

• Tools used: HTML, CSS, JavaScript, GitHub Pages

Hotel Management System (In Progress)

• Building a web-based hotel booking and property management system.

• Features include user authentication, room availability tracking, and automated billing.

• Tech stack includes : Python, Flask, MySQL, HTML/CSS, JavaScript (Planned React upgrade)

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WORK EXPERIENCE

Python Developer | Darwin Technology (Remote – India) June 2023 – February 2024

• Developed and maintained end-to-end backend systems using Python and Django frameworks.

• Built web APIs, automated data workflows using Pandas, and parsed XML with Python scripts.

• Migrated datasets from PostgreSQL to AWS Redshift and optimized database performance.

• Utilized Amazon EC2, S3, and Redshift for cloud storage, compute, and analytics tasks.

• Created backend automation tools and cron jobs using Python and Bash for system efficiency.

• Visualized business data using Matplotlib and developed server analytics dashboards with Psutil and Django.

• Collaborated with cross-functional teams to implement user feedback and debug production issues.

- Wrote and executed automated tests for web applications using Selenium frameworks.
- Designed and deployed scalable RESTful services using Python, JSON, and CRUD logic.

Environment: Python, Django, Pandas, Matplotlib, AWS (EC2, S3, Redshift)

Python Developer Intern | Zensar Technologies (Remote – India) Dec 2022 – May 2023

- Collaborated with stakeholders to gather and translate user requirements into functional specifications.
- Designed and developed scalable web applications using Python and Django following OOP principles.
- Integrated RESTful APIs and handled JSON-based data exchanges for frontend-backend communication.
- Managed MySQL and PostgreSQL databases; wrote optimized queries, stored procedures, and triggers
- Utilized AWS EC2 and RDS for deployment of static/media files and cloud-based databases.
- Built backend modules with Django ORM and ensured robustness through unit testing (TDD approach)
- Participated in Agile development cycles with continuous integration using Jenkins.
- Applied AJAX and jQuery for dynamic content rendering in Django-based interfaces.

Environment: Python, Django, REST APIs, MySQL, PostgreSQL, AWS (EC2, RDS), Jenkins, HTML, CSS, JavaScript

Software Engineer Intern | Darwin Technology (Remote – India) May 2022 – Nov 2022

- Participated in requirement gathering, project planning, and design discussions.
- Developed C++ libraries for address correction and pattern matching using Singleton and Factory Method design patterns.
- Worked on embedded software development using C, C++, and basic debugging of I2C and USB communication protocols.
- Contributed to low-level driver development and integration with microcontrollers (Renesas, Microchip).
- Installed and configured MySQL databases in Linux environments.
- Migrated legacy Fortran and C modules to Python, and integrated using SWIG.
- Used Apache Tomcat for application deployment and conducted unit testing for performance assurance.

Environment: C++, Python, HTML, CSS, JavaScript, MySQL, SWIG, Linux

AI/ML Intern | Verzeo x Zebo.AI (Remote – India) July 2021 – Aug 2021

- Completed a hands-on Artificial Intelligence internship focused on real-time ML applications.
- Gained practical exposure to machine learning pipelines including data cleaning and model evaluation

• Worked on live projects involving supervised learning and model tuning under academic mentorship.

• Built basic AI models using Python, Pandas, and Scikit-learn.

Environment: Python, Scikit-learn, Pandas, Jupyter Notebook