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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

CERTIFICATIONS

IBM Cybersecurity Analyst Professional Certificate

Description:
Completed a hands-on 14-course specialization focusing on cybersecurity tools, network security, architecture, compliance frameworks, threat analysis, digital forensics, and real-world capstone projects. Practiced with IBM QRadar, Wireshark, and industry-aligned methodologies.

Key Sub-Courses:

- **Operating Systems: Overview, Administration, and Security**
- **Computer Networks and Network Security**
- **Database Essentials and Vulnerabilities**
- **Cybersecurity Architecture**
- **Cybersecurity Compliance Framework, Standards & Regulations**
- **Penetration Testing, Threat Hunting, and Cryptography**
- **Incident Response and Digital Forensics**
- **Cybersecurity Case Studies and Capstone Project**
- **Cybersecurity Assessment: CompTIA Security+ & CYSA+**
- **Generalize AI: Boost Your Cybersecurity Career**
- **Cybersecurity Job Search, Resume, and Interview Prep**

Microsoft Cybersecurity Analyst Professional Certificate

Description:
Completed a hands-on 9-course specialization covering Microsoft-powered cybersecurity solutions, cloud security, threat mitigation, identity and access management, compliance, and SC-900 exam prep. Gained practical experience using Microsoft Sentinel, Defender, Azure AD, and Microsoft Purview through real-world case studies and labs.

Key Sub-Courses:

- **Cybersecurity Threat Vectors and Mitigation**
- **Cybersecurity Identity and Access Solutions using Azure AD**
- **Cybersecurity Solutions and Microsoft Defender**
- **Cybersecurity Tools and Technologies**
- **Cybersecurity Management and Compliance**
- **Advanced Cybersecurity Concepts and Capstone Project**
- **Microsoft SC-900 Exam Preparation and Practice**

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.

R Programming (Basic) - HackerRank

- Demonstrated fundamental proficiency in vectors, data frames, control structures, and functions using the R programming language.

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)

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