SURYA PADMINI KONUJULA
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PROFESSIONAL SUMMARY

Experienced Python Developer with over 6 years in full-stack web development, specializing in building and optimizing multi-tier web applications and microservices. Adept at Python-based streaming development, deploying applications using Kubernetes, and managing CI/CD pipelines. Strong expertise in both relational and non-relational databases, including MongoDB and Oracle, with extensive experience in code quality, performance tuning, and troubleshooting. Proficient in collaborating with financial services teams, gathering requirements, and delivering business-critical solutions. Advanced knowledge of GIT, SVN, Bitbucket, and shell scripting in both Windows and Linux environments.

EDUCATION

Louisiana State University: Baton Rouge, LA | MS in Computer Science

KLEF, Guntur, India | B. Tech in Computer Science

WORK EXPERIENCE

Software Developer – Kastech **Jan'24–Present**

- Developed Python-based full-stack web applications for the Wholesale Lending business, focusing on both front-end UI and backend services.
- Designed and implemented multi-tier web applications, incorporating microservices architecture and Python-based streaming solutions.
- Collaborated with business teams to gather requirements and translate them into functional, high-performance solutions.
- Created and managed CI/CD pipelines using Jenkins and Bamboo, automating build, test, and deployment processes.
- Optimized database interactions using MongoDB and Oracle, ensuring efficient data storage and retrieval.
- Managed version control with GIT, SVN, and Bitbucket, following best practices for code quality, unit testing, and performance tuning.
- Demonstrated expertise in Python application development, troubleshooting complex issues, and enhancing application performance in both Windows and Linux environments.

Software Engineer– *Louisiana State University* **Aug'21–Dec'23**

- Assisted in teaching Object-Oriented Programming (OOP) and Database Management to over 500 students, providing technical guidance and clarifying complex concepts such as data structures, algorithms, and relational databases (SQL/PL-SQL).
- Led hands-on coding sessions where students practiced Python and Java programming, helping them develop robust problem-solving skills in Data Structure and Algorithm (DSA) challenges.
- Facilitated weekly discussion sections on topics like multi-tier web applications, microservices, and API development, which aligned with modern industry practices.
- Developed detailed instructional materials, including interactive coding exercises, quizzes, and project guidelines, to enhance students' learning experiences and ensure their understanding of course material.
- Offered one-on-one mentorship during office hours, helping students troubleshoot coding issues, optimize their solutions for performance, and apply best practices in software development.
- Played an integral role in preparing students for real-world development scenarios, particularly in multi-tier architectures, backend programming, and database integration, aligning with industry needs.
- Gained experience in CI/CD processes by helping students set up version control systems (GIT) and deploying their final projects on Linux servers, ensuring practical, hands-on knowledge.

Software Developer – Abridge Solutions **Jul'19–Jul'21**

- Developed and deployed web applications using Flask framework, designed scalable RESTful APIs.
- Integrated machine learning models into web services using Flask and deployed them using AWS.
- Implemented exception handling, logging, and configuration for backend processes.
- Wrote Python scripts to automate data ingestion, manipulation, and migration tasks.
- Leveraged NumPy and Pandas for efficient data analysis, processing large datasets.
- Worked closely with DevOps to deploy applications to cloud environments and managed application version control with Git.

Software Developer Intern – Abridge Solutions **May'18–Jun'19**

- Designed backend applications using Flask and Django, implementing data models with MySQL and PostgreSQL.
- Created RESTful APIs and integrated them with front-end applications for various enterprise-level solutions.
- Utilized Pandas for data analysis and optimized processing pipelines, improving data handling efficiency.
- Deployed applications on Pivotal Cloud Foundry (PCF), ensuring smooth migration to cloud-based environments.
- Built user-friendly web interfaces using HTML5, CSS3, and JavaScript frameworks like React.js.
- Managed project tasks through JIRA and collaborated with a cross-functional team following Agile methodologies.

PROJECTS

Inventory Management System - Kastech

Developed a Django-based inventory management system that tracked stock levels, automated orders, and generated sales reports. Integrated with PostgreSQL and AWS for cloud hosting.

E-Commerce Recommendation System - Abridge

Created a Flask-based recommendation engine using collaborative filtering. Implemented algorithms using Pandas and Scikit-learn to provide personalized product suggestions for users.

Mutual Fund Reconciliation (Zero Touch Automation) - Abridge

Developed a Python-based microservice architecture using Big Data and PySpark to automate mutual fund reconciliation.

Utilized Kafka for real-time data streaming and Docker for scalable deployment. Processed and analyzed large datasets, automating report generation and improving data accuracy.

Interactive COVID-19 Data Visualization and Analysis Tool - LSU

Developed an interactive web-based visualization tool integrating parallel coordinate plots and 2D scatter plots to analyze multifaceted COVID-19 time-series data. Enabled customizable exploration of variables like cases, deaths, and vaccinations, with interactive features such as data normalization, filtering, and timeline analysis to facilitate in-depth insights for user-selected countries.

Design of Smart/Intelligent Agents for Medical Diagnosis - LSU

Smart agents have shown high accuracy in predicting and classifying diseases from medical images and clinical information, improving diagnosis and treatment. In this project, different types of agents were evaluated for Sepsis Prediction, Autism Spectrum disorder, Hepatitis C prediction, and Pneumonia prediction, with hyperparameter tuning and optimizer functions used for conventional and deep learning agents. The study identified optimal agents for each test case, demonstrating the potential of AI in disease prediction and diagnosis. Deep Learning-Based Image Classification Using Convolutional Neural Networks (CNNs) Evaluated three different pre-trained models—ResNet, InceptionV3, and MobileNet—on a common dataset to compare their accuracy and performance. Applied data augmentation techniques and transfer learning to fine-tune each model, achieving high accuracy rates. Leveraged multiple evaluation metrics including confusion matrices, F1-score, and accuracy for comprehensive model performance assessment.

LEADERSHIP ACTIVITIES AND HONORS

- **Agile Excellence Award** Recognized for consistently delivering high-quality solutions within tight deadlines in an Agile environment, demonstrating strong problem-solving skills and adaptability.
- Awarded as best member of CEA KLU, Best TA of the year LSU, ISA President at LSU.

TECHNICAL SKILLS

- Languages & Frameworks: Python (Advanced), SQL, Java, Fast API, Flask, Django, HTML, CSS, JavaScript, C++, PHP
- Technologies: MongoDB, Kubernetes, RESTful APIs, CI/CD pipelines, GIT, SVN, Bitbucket, Shell & Batch Scripting
- Tools & Platforms: Azure, Power BI, Microsoft Office, Windows & Linux OS
- Core Competencies: Full-Stack Development, Multi-tier Applications, Microservices, Streaming Development, Python Design Patterns, Troubleshooting, Performance Tuning, Unit Testing, Agile Methodology