SUBASRI V

SOFTWARE PROGRAMMER

PROFESSIONAL SUMMARY

CONTACT INFORMATION

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OBJECTIVE

A highly motivated and detail-oriented Computer Science Engineering graduate with a strong foundation in programming, problem-solving, and software development. Seeking a dynamic role as a to leverage my technical expertise, coding enthusiasm, and problem-solving skills to contribute to the development of innovative and efficient software solutions. I aim to work in an environment that fosters continuous learning and development while providing me with opportunities to grow as a technology professional.

EDUCATION

- **Bachelor of Engineering in Computer Science**
  Graduated with Distinction, First Class from Anna University
  CK College of Engineering & Technology, 2020 – 2024
    - Percentage: 89%
    - Relevant Coursework: Data Structures and Algorithms, Artificial Intelligence, Database Management, Software Engineering, Web Development, Cloud Computing, Machine Learning.
- **Higher Secondary Education**
  Thiruvalluvar Matriculation Higher Secondary School, 2020
    - Percentage: 84.83%
    - Focused on Science and Mathematics, laying the foundation for analytical thinking and problem-solving skills.
- **Secondary School Education**
  Thiruvalluvar Matriculation Higher Secondary School, 2018
    - Percentage: 92.8%
    - Achieved academic excellence with a strong focus on core subjects like Mathematics, Science, and Computer Science.

ACHIEVEMENTS

- Received Rs. 7500 for the project "Asthma Prediction using Internet of Things and Machine Learning" from Tamilnadu State Council for Science and Technology.
    - Developed a predictive model using IoT sensors and ML algorithms to monitor and predict asthma attacks.
- Secured 3rd Prize for the project "AIRGES" (Hand Gesture Recognition) in a Hackathon conducted at my college.
    - Designed a system to recognize hand gestures using computer vision and machine learning, enabling touchless control of devices.
- Earned Gold Badge in Hackerrank for exceptional problem-solving skills in coding challenges.
- Attended the National Conference on Emerging Technologies and Computing Applications and presented a project titled "Image Captioning for Spam Prediction."
    - Developed an AI-based system to generate captions for images and detect spam content.

WORK EXPERIENCE

Software Programmer
Munyongo India Private Limited, Chennai | Jan 2021 – Mar 2025

- **AWS Lambda Deployment:**
  - Designed and deployed AWS Lambda functions to automate backend processes, reducing manual intervention by 40%.
- **DocumentDB Optimization:**
  - Optimized DocumentDB queries to improve data retrieval efficiency, resulting in a 30% reduction in query execution time.
- **Industrial Automation:**
  - Automated industrial machines using Python, enhancing operational efficiency and reducing downtime by 25%.
- **Code Development & Documentation:**
  - Wrote clean, maintainable, and efficient code following PEP 8 standards for Python.
  - Created comprehensive documentation for code using NumPy docstrings, ensuring clarity and ease of use for other developers.
  - Developed library code for reusable components, improving code modularity and reducing development time.
- **Technical Documentation:**
  - Generated Sphinx documentation for Python projects, providing detailed API references and usage guidelines.
  - Created LaTeX documentation for technical reports and project deliverables, ensuring professional and well-structured documentation.
- **Unit Testing & Detailed Design:**
  - Implemented unit testing using frameworks like unittest and pytest to ensure code reliability and robustness.
  - Designed UML diagrams (e.g., class diagrams, sequence diagrams) to visualize system architecture and workflows.
- **Sentry Instrumentation:**
  - Integrated Sentry for error tracking and monitoring, enabling real-time issue detection and resolution.
- **Data Visualization Dashboards:**
  - Built interactive dashboards using tools like Opensearch and Node-RED to visualize data and provide actionable insights to stakeholders.
- **Collaboration:**
  - Worked closely with cross-functional teams to deliver high-quality software solutions within tight deadlines.
- **Can Operation and Maintenance:**
  - Ensured the smooth operation and maintenance of systems to meet SLA (Service Level Agreement) and SLO (Service Level Objective) requirements.
  - Monitored system performance, identified bottlenecks, and implemented optimizations to maintain high availability and reliability.
  - Conducted regular system audits and implemented preventive measures to avoid downtime.

SKILLS

- **Programming Languages:** Python, Java, C
- **Web Technologies:** HTML, CSS, JavaScript, Flask, Django
- **Database Management:** SQL, MongoDB
- **Tools & Frameworks:** AWS (Lambda, EC2, S3, MQTT Client Kafka)
- **Machine Learning Libraries:** TensorFlow, Keras, scikit-learn
- **Cloud Technologies:** AWS (CloudFormation, Lambda, DynamoDB)
- **Monitoring & Visualization:** Node-RED Dashboards, OpenSearch Dashboards, Sentry
- **Technical skills:** Problem-solving and algorithm design, Machine Learning algorithms, Cloud computing concepts
- **Soft skills:** Team work, Colloboration, Lead, Time Management, Communication

PROJECTS

1. iSmart Industries: Proactive Explosion Risk Monitoring

- Technologies Used: Support Vector Machines (SVM), Continuous Learning Algorithms, IoT Sensors, Centralized Monitoring Unit.
- Key Features:
  - Integrated Safety Management System (ISMS): A central unit directs the system, issuing warnings through alarms, texts, and visual alerts to nearby workers.
  - Robust Backup Plans: Ensured consistent power and communication for system reliability.
  - User-Friendly Interface: Enabled swift decision-making during emergencies.
  - Regular Updates & Training: Focused on pressure and temperature prevention to maintain safety standards.
- Outcome:
  - Selected for Niral Thiruvizha among 100 projects, showcasing its innovation and impact on industrial safety.
  - The proactive approach aims to safeguard vital industrial operations, supporting India's economic growth.

2. ODIR: Ocular Disease Intelligent Recognition

- Technologies Used: Python, TensorFlow, Convolutional Neural Networks (CNNs), IBM Watson.
- Key Features:
  - Automated detection of ocular diseases such as glaucoma, diabetic retinopathy, and cataracts.
  - Integration with IBM Watson for advanced data analysis and decision support.
  - User-friendly interface for healthcare professionals to interpret results.
- Outcome:
  - Achieved high accuracy in disease detection, aiding early diagnosis and treatment.
  - Demonstrated the potential of AI in revolutionizing healthcare diagnostics.

3. AIRGES: Hand Gesture Recognition System

- Objective: To develop a system that recognizes hand gestures and translates them into commands for touchless device control.
- Technologies Used: Python, OpenCV, TensorFlow, Convolutional Neural Networks (CNNs).
- Outcome: Successfully implemented a real-time hand gesture recognition system with 90% accuracy, enabling touchless interaction with devices.

4. Image Captioning for Spam Prediction Using Artificial Intelligence

- Objective: To automatically generate captions for images in WhatsApp and detect spam content.
- Technologies Used: Python, TensorFlow, Natural Language Processing (NLP), Computer Vision.
- Outcome: Developed a system that reports and blocks accounts in case of inappropriate captions, reducing spam by 50%.

5. Asthma Prediction using IoT and Machine Learning

- Objective: To predict asthma attacks using IoT sensors and machine learning algorithms.
- Technologies Used: Python, IoT sensors, Scikit-learn, Flask.
- Outcome: Developed a predictive model with 85% accuracy, helping users monitor their health proactively.

DECLARATION

I hereby declare that all the information provided in this resume is true, complete, and accurate to the best of my knowledge. I understand that any misrepresentation or omission of facts may lead to disqualification or termination of employment.

Place: Chennai
Date: 2025-03-19

(SUBASRI V)