G Sai Charan

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SUMMARY

Experienced Backend Engineer with a strong foundation in developing secure web platforms and optimizing APIs, achieving a 40% reduction in response times. Proven track record in automating backend testing and enhancing scalability by 25%. Skilled in Python, SQL, and AWS, ready to leverage expertise to drive efficient and secure backend solutions.

EXPERIENCE

UdbhavX - Stealth Startup   **Nov 2024 - Present**
Machine Learning Engineer   *USA*
- Designed and implemented AI-powered interest graphs and intelligent matching algorithms to connect students, startups, investors, and mentors on an early-stage networking platform.
- Led the development and user testing of the MVP, achieving 85% match accuracy during beta. Managed cross-functional coordination and documented processes to enhance AI architecture and improve stakeholder communication

Labelmaster Services Inc   **Jan 2025 - May 2025**
Data Analyst Apprentice (Capstone Project)   *Chicago, IL*
- Directed the integration of CRM, SEO, Google Ads, and email datasets using Python and SQL, which enhanced data-driven marketing strategies by identifying high-conversion keywords and campaign insights
- Built Power BI dashboards that uncovered engagement patterns and improved product targeting, leading to a 25% reduction in reporting time and improved campaign planning efficiency.

CognitivZen Technologies Pvt Ltd   **Jul 2021 - Jul 2023**
Backend Engineer/ Machine Learning Engineer   *Hyderabad, INDIA*
- Led the secure development and deployment of a web platform with OWASP ZAP and CVSS-based vulnerability scoring. Oversaw compliance alignment and collaborated with security teams to strengthen client trust and platform resilience.
- Automated backend testing using custom frameworks and optimized APIs, reducing manual QA by 40% and API response times by 40%, enabling 25% better scalability.
- Built a web application using Docker and AWS services, which improved API integration and enhanced user experience by streamlining deployment processes
- Created an in-house web application using OWASP ZAP to test application security by sending malicious data, which improved vulnerability detection and strengthened overall security measures
- Spearheaded implementation of Role-Based Authentication (RBAC), managing security policy updates and improving compliance posture while reinforcing AI system architecture.
- Developed code to efficiently store and retrieve data from non-SQL databases, contributing to seamless data management
- Integrated an OWASP ZAP tool into application to perform a crawl on application to fetch all URLs present in application
- Performing attacks on URLs in every possible way (URL, headers, cookies) to make vulnerabilities to get exploited using malicious data
- Proactively led the design and development of an in-house automation framework from the ground up, significantly reducing work complexity by 40% and streamlining operations through innovative problem-solving.
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PROJECTS

Cold Mail Generator   **Feb 2025**
- Built an automated cold email tool using Groq, LangChain, and LLMs to extract job listings and generate personalized emails with portfolio links.
- Achieved a 60% time reduction in outreach operations by fully automating candidate-role matching and email generation.

Multi PDF Files Chatbot   **Jan 2025**
- Developed a chatbot that processes multiple PDF documents using vector embeddings and LLM-based similarity search.
- retrieval accuracy and user experience by grounding responses strictly in document content, improving trust and relevance in output.

Agentic Design Patterns with AutoGen   **Jan 2025**
- Designed a multi-agent system using AutoGen for tasks like blog generation, customer onboarding, and financial insights.
- Integrated reflection-based decision flows and agent coordination, showcasing human-in-the-loop AI capabilities in production scenarios.

Earth Surface Temperature Forecasting   **Feb 2024 - May 2024**
- Applied SARIMA models on 270+ years of temperature data for long-term forecasting, benchmarking against ARIMA.
- Achieved 40% higher accuracy with RMSE of 6.95, enabling actionable insights for energy policy and environmental planning.

Healthcare Management System Sep 2023 - Dec 2023

- Design of a high-availability, cloud-based patient data management system. Managed system performance and process optimization through OLAP query tuning and stakeholder-driven feature development.
- Achieved 99.9% uptime and reduced billing latency by 60%, improving operational continuity and patient experience.

Hybrid CNN Architectures Sep 2023 - Dec 2023

- Created a CNN with skip connections and tuned hyperparameters using Bayesian optimization on a 12,000-image dataset.
- Reached 88.8% classification accuracy, enabling detailed species identification in biodiversity research.

Kaptaan Mac Cloud Inventory Dec 2022 - Mar 2023

Microsoft

- Developed an Azure-hosted inventory system for Mac OS provisioning using Python, SQL, and Azure Service Bus.
- Integrated agent modules for real-time updates, implemented RBAC controls, and set up CI/CD pipelines with Azure DevOps. Improved asset tracking and reduced manual configuration overhead across enterprise systems.

WAS (Web Attack Simulator) Jun 2021 - Dec 2022

Virsec (Company Website)

- Engineered a modular web attack simulator to test high-risk vulnerabilities; integrated OWASP ZAP and Splunk for end-to-end compliance and observability.
- Directed microservices deployment using Docker, CI/CD pipelines, and Git workflows. Managed release operations and quality assurance processes, reducing release complexity by 40% and increasing security test coverage.

TECHNICAL SKILLS

- **Programming**: Python (TensorFlow, PyTorch, Scikit-learn, Pandas, Numpy), DAX, SQL, MongoDB, Redis, R, RESTful APIs, PySpark, Debugging
- **Development Concepts**: Object-Oriented Programming, Functional Programming, Singleton, Decorator, Agile (Scrum, Kanban), Waterfall
- **Devops & Big Data**: Linux, Shell, Git, CI/CD (Github), Scrum, HDFS, Hadoop, Spark, Kafka
- **Cloud & Web Technologies**: AWS (EC2, S3, Lambda, ACM), Docker, Kubernetes, Streamlit, Jupyter Notebooks, HTML, CSS, JavaScript
- **Generative AI & LLMs**: GPT-4, Llama, AutoGen, Claude, Langchain, Langgraph, Hugging Face, Groq, OpenAI, LLM-based Transformers
- **AI/ML & Optimization**: Time-Series Forecasting, MPC, Stochastic Optimization, XGBoost, CNN (ResNet), Computer Vision, Predictive Analytics, Stochastic Optimization, Model Deployment, Model Monitoring

EDUCATION

Illinois Institute of Technology, Chicago, IL Aug 2023 - May 2025

Master's, Data Science

- **Achievements:** Appointed as the Illinois Tech Campus life Ambassador, Merit based Scholarship - $10,000
- **Coursework:** Machine Learning, Time Series Analysis, Optimization Techniques, Big Data, Cloud Computing