

# Sharwan Ram

**Senior Software Engineer | Data & Security Engineering | Cloud & AI-Driven Data Platforms**  
Jaipur, India | Open to Relocation | +91-9782199550 | [srvnforensoft@gmail.com](mailto:srvnforensoft@gmail.com) | [linkedin.com/in/shrawanram](https://linkedin.com/in/shrawanram)

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## PROFESSIONAL SUMMARY

AWS Certified Solutions Architect – Professional and CompTIA PenTest+ certified engineer with 6+ years of experience designing secure, analytics-driven data platforms on AWS and Databricks. Skilled in architecting ETL pipelines, governance systems, and AI-driven compliance frameworks that power enterprise analytics and security insights.

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## EXPERIENCE

### **Senior Software Engineer | Garmin International, Kansas, USA | June 2025 – Present**

- Architected cloud-native pipelines integrating telemetry, SBOM, and compliance datasets within an AWS + Databricks Lakehouse, enhancing analytics accessibility and governance across 250+ product lines.
- Developed GenAI-based data processing workflows using AWS Bedrock and OpenAI APIs to extract insights from compliance documents, cutting manual review effort by 40%.
- Transformed SAST findings into AI-driven data pipelines using Databricks and Delta Lake, automating issue categorization and improving remediation efficiency by 30%.
- Designed data lineage and traceability dashboards in Tableau, improving visibility across 250+ product lines.
- Collaborated with governance and compliance teams to build EU RED / CRA-ready data models, enabling structured, auditable reporting.
- Tuned Spark SQL and distributed compute strategies, improving performance 3.2× and saving \$120K annually.
- Led enterprise migration of compliance data pipelines to AWS, reducing manual effort 65%.

### **Software Engineer 2 | Garmin International, Kansas, USA | Jan 2023 – Jun 2025**

- Engineered ETL and orchestration pipelines processing component, vulnerability, and telemetry data from 1,000+ builds using AWS Glue, Step Functions, and Databricks.
- Built LLM-powered semantic search for querying vulnerability and dependency datasets in natural language.
- Migrated legacy static-analysis results into structured Delta Lake datasets, enabling near-real-time analytics.
- Created a PySpark-based validation framework for schema and data-quality governance across ingestion layers.
- Automated generation of EU RED / CRA compliance datasets and built Tableau dashboards providing real-time leadership visibility.
- Mentored peers on data-pipeline design and Databricks best practices.

### **Software Engineer Intern | EnSoft Corp, Iowa, USA | May – Aug 2021 & 2022**

- Evolved internal analytics from scripts to Databricks notebooks with Delta Lake versioning and auditability.
- Introduced Spark streaming for near-real-time build metrics; improved latency/observability of engineering KPIs.
- Prototyped ML-based anomaly detection on build performance data to prioritize defects and trend outliers.

### **Software Engineer | EnSoft Corp, Rajasthan (India) / Iowa, USA | Jan 2019 – Dec 2020**

- Built data-collection frameworks analyzing large-scale software builds and code-quality metrics.
- Migrated analytics systems from on-prem to AWS S3 / Redshift, cutting batch latency by 45%.
- Implemented ETL automation using Python + Spark, improving batch efficiency by 40%.
- Built data profiling tools to enhance maintainability and support modernization efforts.
- Automated CI/CD data workflows using Jenkins and Maven.

## Visiting Researcher | Iowa State University, Iowa, USA | Jun 2018 – Nov 2018

- Contributed to DARPA's Space/Time Analysis for Cybersecurity (STAC) program, developing data-driven vulnerability analysis tools.
- Designed AI-assisted program analyzers for anomaly detection in C/C++ codebases.
- Published award-winning research on analytical modeling of software-security data.

## Research & Teaching Assistant | Iowa State University, Iowa, USA | Spring 2021 – Fall 2022

- Built an ML-based classifier to identify loop behaviors in Linux kernel code, cutting review time by 60%.
- Guided 350+ students on data pipelines, software analytics, and automation.

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## SKILLS

**Data Engineering & Analytics:** Python (Pandas, PySpark), SQL, Databricks, Spark, Glue, Redshift, EMR, Athena, Tableau, Delta Lake, Airflow

**Cloud Platforms:** AWS (S3, Lambda, RDS, Step Functions, CloudFormation, IAM), Azure (Databricks, Blob Storage)

**AI & ML:** AWS Bedrock, SageMaker, OpenAI APIs, LangChain, Vector DBs (Pinecone, FAISS), NLP Automation

**Security & Compliance:** SBOM, CycloneDX, SPDX, Vulnerability Analytics, Metadata Pipelines, Governance & Lineage, EU RED / CRA Reporting

**DevOps & Automation:** Git, Jenkins, Docker, CI/CD Pipelines, JIRA, Jupyter Notebooks

**Data Architecture:** ETL/ELT Design, Data Lakes, Warehousing, Modeling, Data Quality & Access Control

**Programming:** Python, Java, C/C++, SQL, Shell

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## EDUCATION

**Master's** in Computer Engineering | Iowa State University, Iowa, USA | 2021 – 2022

**M.Tech** in Computer Engineering | Malaviya National Institute of Technology, Jaipur, Rajasthan | 2016 - 2018

**B.Tech** in Computer Science & Engineering | Rajasthan Technical University, Kota, Rajasthan | 2011 – 2015

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## CERTIFICATIONS

- AWS Certified Solutions Architect – Professional (Active)
- AWS Certified Developer – Associate (Active)
- CompTIA PenTest+ (Active)

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## ACHIEVEMENTS

- **Data & AI Innovation Award (2024)** – Garmin International for leading GenAI-driven compliance automation.
- **Compliance Excellence Award (2024)** – Garmin International for enabling continuous European product sales through EU RED / CRA readiness.
- **Top Performer (2018)** – DARPA (U.S. Defense) STAC Program, Iowa State University for advancing static-analysis automation.
- **Best Challenge Entry Award (2018)** – IEEE DySDoc3, Madrid, Spain for research on documentation analytics and software comprehension.

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## HOBBIES

Traveling, AI Training, AI Model Simulation, Running, Music, Fitness