Shreya Sunil Kale

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PROFESSIONAL SUMMARY

Software Engineer pursuing an M.S. in Computer Science at ASU with over **2+ years of experience** developing scalable applications. Experienced in algorithms, data structures, system design, and software development with attention to performance, reliability, and code quality.

EDUCATION

Arizona State University, M.S. in Computer Science — Aug 2025 - Present (Expected May 2027)

- **Coursework:** Statistical Machine Learning, Cloud Computing, Knowledge Representation and Reasoning, Data Visualization, Software Design, Foundation of Algorithms

Savitribai Phule Pune University, B.E. in Computer Engineering (GPA: 3.72/4.0) — Aug 2019 - Mar 2023

TECHNICAL SKILLS

Programming Languages: Java, C, C++, JavaScript, TypeScript, Python, SQL, HTML5, CSS3

Frameworks & Systems: Django, Flask, Rest API, Boto3, TensorFlow, PyTorch, Keras, Scikit-learn, Pandas, NumPy, Matplotlib, Angular, Node.js, Spring Boot, React.js, Express.js, Microservices, Distributed Systems, SIEM, MITRE ATT&CK

Big Data & Databases: SQL (MySQL, PostgreSQL), NoSQL (Cassandra, MongoDB), Apache Spark, Kafka

Tools: Git, Jenkins CI/CD, Docker, Kubernetes, Prometheus , JIRA, Wireshark, x64dbg, OllyDbg, DnSpy, Ghidra

Cloud Platforms: AWS(EKS, S3, EC2, SQS, ELB, Lambda, DynamoDB, CloudFormation), Google Cloud Platform

WORK EXPERIENCE

Malware Analyst and Threat Researcher - LTIMindtree Ltd. — Aug 2023 - May 2025

- Developed an automated malware analysis pipeline that processed over **5,000 executables** daily using machine learning for static analysis, reducing **false positives by 60%** and **triage time by 40%**.
- Built modular threat classification algorithms for PE, Non-PE, and PUA/UWS files, enabling automated rule generation and better threat mapping. Integrated into Microsoft Defender's engine, enhancing real-time coverage and **reducing manual updates by 25%**.
- Performed in-depth **debugging & reverse engineering** on 300+ .NET/MSIL binaries using x64dbg, OllyDbg, DnSpy and Wireshark to identify obfuscation and network-level evasion pattern enabling **zero-day signatures** aligned with MITRE ATT&CK.
- Collaborated with cybersecurity and DevSecOps teams to automate malware rule deployment and configuration management using Jenkins and Ansible within CI/CD pipelines, reducing release time and **improving delivery efficiency by 35%**.

Software Developer Intern - LTIMindtree Ltd. — Feb 2023 - May 2023

- Engineered two full-stack applications (Digital Banking, Claims Processing) with Angular, TypeScript, and Java (Spring Boot, JDBC), integrating RESTful and GraphQL APIs to deliver **99%+ uptime** and support **10k+ concurrent users**.
- Enhanced scalability, security, and code quality through microservice modularization, optimized SQL queries, and rigorous input validation; contributed across **SDLC** in Agile sprints and earned "Star Performer" for **90%+ technical scores** and **30% faster review cycles**.

TECHNICAL PROJECTS

Real-time Collaborative Application

- Architected **multi-user collaborative platform** using WebSockets, Socket.io, and React.js with operational transformation algorithms for conflict resolution, **supporting 100+ concurrent users** with sub-**50ms latency**.
- Implemented **live cursor tracking**, **real-time text synchronization**, and user presence indicators with Node.js backend and Redis state management, achieving **99.9% uptime**.

Yoga Pose Estimation Using Machine Learning

- Developed a **real-time yoga pose estimation system** using **TensorFlow**, **OpenCV**, and KeyPoint detection, achieving **92% pose classification accuracy** in 10 + yoga poses and maintaining a sub-100 ms inference latency for mobile deployment.
- Applied CNNs for image processing and skeletal tracking using augmentation and frame-level evaluation to improve **reliability by 35%**.

Sentiment Analysis for Social Media Insights

- **Engineered sentiment classification models** using **Hugging Face Transformers** and **BERT**, achieving **88%+ F1 score** on 20K+ social media posts; fine-tuned pre-trained models for domain-specific insights.
- Enhanced real-time inference using text preprocessing, tokenization, and embeddings, increasing sentiment analysis throughput by **65%**.

LEADERSHIP AND IMPACT

- **President & Treasurer**, ACM Student Chapter – Organized 5+ technical workshops and networking events for **1000+ participants**, driving engagement and enhancing campus visibility.
- **Technical Lead**,(GDSC) - Conducted technical workshops, hands-on labs, and talks **impacting 2000+ students** across disciplines.