Winston Mascarenhas

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Professional Summary

Information Risk Management professional with proven expertise in building secure, automated platforms that ensure high availability and reduce incidents. Achieved 60% faster release cycles and 99.9% uptime at Brillio by implementing CI/CD, GitOps, and real-time observability. Skilled in risk-based incident prioritization, vulnerability management, and cross-team coordination to meet tight SLAs. Adept at automating workflows, enforcing security controls, and driving measurable improvements in security posture and customer satisfaction.

Work Experience

SENIOR ENGINEER, DIGITAL INFRASTRUCTURE – BRILLIO

2022-10-12 to 2024-10-14 | BENGALURU, INDIA

- Operated in high-pressure environments requiring rapid incident resolution, structured risk prioritization, and cross-functional coordination.
- Resolved 95%+ of escalated incidents—including authentication failures, phishing, and endpoint/security alerts—through rapid containment and root-cause fixes, reducing downtime.
- Provided security guidance on MFA, phishing prevention, and safe data handling; authored quick-win playbooks to standardize responses.
- Cleared 100% of backlog tickets within SLA by triaging risk using asset criticality and CVSS scores, prioritizing vulnerability tickets, and streamlining handoffs.
- Managed least-privilege IAM approvals and periodic access reviews; enforced MFA, TLS/mTLS, and segmentation/firewall rules aligned with ISO 27001.
- Automated security monitoring workflows during critical periods, boosting operational readiness and team productivity by 30%.
- Maintained 99% documentation accuracy for incidents and access changes, strengthening audit readiness.
- Ensured clear, risk-aware communication with end-users, increasing customer satisfaction by 80.79%.
- Collaborated with DevOps, Platform, and Security teams to resolve multi-layer issues, reducing turnaround time by 35%.
- Prioritized incidents by asset criticality and exploitability, achieving 100% SLA compliance for high-severity tickets.
- Balanced security guardrails with usability, contributing to a 97.3% positive feedback rate.
- Recognized as “Best Employee of the Month" for outstanding service delivery and SLA gains.

Education

MASTERS RESEARCH IN COMPUTER AND SYSTEMS ENGINEERING

Technische Universität Ilmenau | Ilmenau, Germany | Graduated: Present

BACHELOR OF COMPUTER APPLICATION

St. Joseph's College (Autonomous) | Bengaluru, India | Graduated: 2022-10-22

Volunteering & Leadership

Volunteer – AERO INDIA 2021

2021-02-03 to 2021-02-05

- • Volunteered at Aero India 2021 as Medical Department Incharge, coordinating hospital operations and facilitating liaison between Commando Air Force Hospital and Hindustan Aeronautics Limited India, ensuring strict confidentiality and emergency response readiness.
- Facilitated as Coordinator between the Commando Air Force Hospital and Hindustan Aeronautics Limited India.

President – National Service Scheme

2020 to 2021

- • Led National Service Scheme at St. Joseph's College (2020-2021), orchestrating 50-60 events/drives (blood donation, clean-ups, vaccination support) with 250 volunteers, reaching 5000 beneficiaries on campus and locally.
  • Implemented event SOPs (first aid, crowd control, access control, data-minimizing sign-ups) and conducted briefings/drills, resulting in zero major incidents.
  • Enforced code of conduct, PII-light registration, and approval workflows with university and municipality; maintained risk register and after-action reviews.
  • Coordinated rosters, logistics, and communications using Sheets, Forms, WhatsApp, and Email; applied RACI matrices and checklists to ensure timely delivery.

Cultural Representative – National Service Scheme

2021 to 2022

- • Served as Cultural Representative (2021-2022), participating in social service events, workshops, and cultural programs with hosting responsibilities.

President – Eco- Club at St. Joseph's Pre university College

2018 to 2019

- In 2018-2019, I served as President for Eco- Club at St. Joseph's Pre university College, I was involved in leading and coordinating efforts to promote environmental awareness, sustainability, and eco-friendly practices within the college community.

Projects

Elastic ML Inference Serving

2025-05 to 2025-07

- Designed a scalable ML inference service handling bursts of ~150 RPS with p95 latency ~280 ms and error rate <1%, reducing downtime by 35%.
- Applied security-by-design principles including HTTPS/TLS, API token authentication, and rate limiting to mitigate risks.
- Implemented telemetry and operational risk controls with Prometheus, Alertmanager, Grafana, ELK/Loki, and GitHub Actions, enabling rapid incident detection and recovery.
- Designed and implemented a scalable ML inference service handling bursts of ~150 RPS with p95 latency ~280 ms and error rate <1%, reducing downtime by 35%.
- Applied security-by-design principles: HTTPS/TLS, API token authentication, secrets hygiene, rate limiting, and PII-free logging to mitigate risks.
- Instrumented telemetry and alerts for latency, error rate, and request queue depth, enabling mean time to detection (MTTD) of ~2 minutes.
- Implemented operational risk controls including canary releases with quick rollback (<3 min) and runbooks to minimize incident impact and recovery time (MTTR ~6 min).
- Used Prometheus, Alertmanager, Grafana, ELK/Loki, GitHub Actions for monitoring, alerting, logging, and CI automation.
- Automated health checks, graceful restarts, and autoscaling based on CPU and queue metrics to maintain service reliability and prevent overload.

HISSEC – ABAC-Based Access Control for Hospital Information System

2025-06 to 2025-07

- Selected ABAC (ABACα variant) as core paradigm, incorporating GDPR-style principles and ward-level data isolation.
- Designed attribute resolution strategy reducing rule complexity by 40% and enabling faster policy updates.
- Modeled user/admin state transitions as deterministic automaton to prevent privilege escalation; authored formal policies ensuring auditability.

AES Implementation

2024-11-20 to 2024-12-04

- Developed AES encryption/decryption module compliant with NIST FIPS-197, implementing core rounds and ECB/CBC modes.
- Validated against official NIST test vectors with 100% correctness; applied secure key handling practices.
- Benchmarked runtime and memory usage using Python profiling tools, demonstrating secure and efficient implementation.

Weaponization of IOT- The rise of Microbots

2020-05 to 2020-10

- Conducted 6–8 weeks of academic research reviewing 35–45 sources; applied STRIDE and MITRE ATT&CK frameworks.
- Identified critical IoT risks including insecure boot, unsigned firmware, weak credentials, and poor segmentation enabling lateral movement.
- Proposed mitigations such as secure boot, signed firmware, identity-first access, OTA hardening, and Zero Trust micro-segmentation.