

BENSON MACHARIA

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PROFESSIONAL SUMMARY

I am an experienced Cybersecurity and IT Risk professional with over six years of experience in designing secure applications and ensuring zero critical or high-risk issues for applications deployed to production. Proficient in conducting vulnerability assessments and penetration testing of enterprise applications, networks and cloud environments. Proven track record of enhancing pipeline security by ensuring 100% integration of selected automated security testing tools in CI/CD pipelines.

TECHNICAL SKILLS

Security Testing: Kali Linux, Metasploit, Nmap, SQLMap, Nessus, InsightVM, Burp Suite, Acunetix, MITRE ATT&CK.

Cloud: AWS Cloud, Google Cloud Platform (GCP), Azure Cloud.

DevSecOps: Docker, Kubernetes, Jenkins, Jfrog Artifactory, SonarQube, Veracode, OWASP ZAP, Acunetix, GitLab CI.

Automation: Python, Bash, PowerShell, Golang, Ansible, Javascript, Terraform, Java, PHP, C, C++, C#

Databases: MySQL, MongoDB, SQLite, PostgreSQL, Oracle, Microsoft SQL Server, DynamoDB, Cassandra, Redis.

WORK EXPERIENCE

Principal/Manager Cybersecurity Assurance

Safaricom PLC (Vodafone Group Subsidiary)

Dec 2021 - Present

- Champion adoption and integration of DevSecOps tools like Veracode and OWASP ZAP within the CI/CD pipelines for automatic security scanning, reducing software pipeline security vulnerabilities by 40%.
- Create security automation scripts using Python and Bash, resulting in a 30% decrease in manual security compliance checks on servers and database systems.
- Manage the private bug bounty program, validating all reports, awarding and facilitating closure of reports by project teams within defined SLAs.
- Conduct red team exercises on at least 2 applications in production every month, reporting on findings and facilitating closure of all issues within SLA.
- Conduct security assessments for all waterfall and agile projects before go-live, ensuring closure of all critical/high/Medium risk defects before project go-live.
- Coordinate cross-functional teams to implement security controls and practices required by PCI DSS, resulting in the organization attaining PCI DSS certification within 6 months.

Assistant Manager Cybersecurity Consulting

Ernst & Young (EY)

Feb 2019 – Dec 2021

- Conducted Central Bank of Kenya (CBK) cybersecurity compliance reviews for three leading Tier 1 and Tier 2 banks in Africa over a three-year period, facilitating closure of 95% of identified security gaps.
- Led a team of 5 cybersecurity consultants, ensuring delivery of high-quality security assessments and maintaining a client satisfaction rate of 98%.
- Managed project timelines, budgets, and resources, achieving a 95% on-time delivery rate.
- Implemented security frameworks and compliance standards such as ISO 27001, NIST, and PCI DSS, ensuring clients' adherence to industry regulations.
- Developed and delivered cybersecurity awareness training programs for clients, enhancing their security posture and reducing phishing incidents by 40%.

Database Administrator

The Judiciary of Kenya

Dec 2016 – Jan 2019

- Led a team of 3 database administrators, managing over 10 enterprise databases running on Oracle, PostgreSQL, Mongo and MySQL database systems across multiple environments, ensuring 95% uptime through optimized maintenance schedules and proactive monitoring.
- Coordinated database backup and ensured 99.9% backup success rate by automating the backup processes and conducting regular recovery drills.
- Conducted quarterly security audits and vulnerability assessments on the databases, reducing potential security threats by 50%.

- Improved database query performance by 25% through database tuning and indexing strategies.
- Successfully led the migration of over 5TB of data from legacy case management system database to modern a database platform on Cloud with zero data loss.

Applications Developer

World Agroforestry Centre (ICRAF)

May 2014 – Dec 2016

- Developed a key research projects full-stack web application using JavaScript, HTML, CSS, and PHP Laravel, increasing project work visibility and research papers downloads by over 50%
- Implemented responsive design for the corporate website, resulting in a 40% increase in mobile traffic.
- Managed the migration of partners website from Joomla to WordPress, improving site performance and user experience by 60%.
- Integrated third-party services and APIs into the intranet web application, enhancing application functionality and user experience by 35%.

EDUCATION

Strathmore University	MSC. Information Systems Security	Aug 2018 – Dec 2021	Nairobi, Kenya
Kenyatta University	BSc. Computer Science	Sep 2011 – Jul 2015	Nairobi, Kenya

CERTIFICATIONS

- Certified Information Systems Security Professional (CISSP)
- Certified Information Systems Auditor (CISA)
- Certified Ethical Hacker (CEH)
- AWS Certified DevOps Professional
- AWS Certified Solutions Architect
- Google Cloud Certified Security Engineer Professional
- Microsoft Certified Azure Security Engineer
- API Security Architect

ASSOCIATIONS

- Member of International Information System Security Certification Consortium (ISC2)
- Member of Information Systems Audit and Control Association (ISACA)
- AWS Community Builder and ISACA Mentor

PROJECTS

CIS Benchmark Scripts [<https://github.com/bensonmacharia/CIS-Benchmark-Scripts>]

- A compilation of scripts developed from CIS benchmarks to aid system administrators in hardening their databases and operating systems for compliance with industry standards.
- It also comes in handy for IT auditors and cybersecurity consultants tasked with evaluating organizations' infrastructure configurations for compliance with set minimum security standards.

PHP Type Juggling [<https://github.com/bensonmacharia/php-type-juggling>]

- A trivial challenge developed to demonstrate the PHP Type Juggling vulnerability and its exploitation.

Secrets Management Sam [<https://github.com/bensonmacharia/secrets-management-sam>]

- Demonstrates the secure secrets management practise with AWS Secrets Manager in AWS Serverless Application Model (AWS SAM).
- The sample application makes use of several AWS resources, including Lambda functions, an API Gateway API and Amazon SQS tables to demonstrate the capabilities of AWS Secrets Manager in storing, retrieving, and managing secrets within AWS.

PUBLICATIONS

- Personal Blog - <https://bmacharia.com>
- Medium - <https://medium.com/@bmacharia>
- Dev.to - <https://dev.to/bensonmacharia>