Santosh Kumar, PMP, CISSP, CISA, CISM, CHFI, CEH, FIP, CIPP/E, CIPM

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PROFESSIONAL SUMMARY

- **Strategic Leadership**: With over 20 years of experience, successfully aligned IT frameworks with organizational objectives, fostering growth and innovation in diverse roles, including CIO, CISO, Chief Engineer, HoD Developer, Security Manager, and Project Manager.
- **High-Impact Leadership & Budget Management**: Led teams of over 1,000+ professionals and managed budgets exceeding $800 million
- **Results-Driven**: Solved complex challenges, delivering outcomes with precision and urgency.

KEY COMPETENCIES AND SKILLS

- **Cybersecurity**: Expertise in designing advanced security architectures and chip-to-cloud, end-to-end cybersecurity solutions across the product lifecycle, encompassing development, operations, and decommissioning.
  - **Chip-to-cloud & End-to-End Security Architect**: Conducted 300+ Threat and Risk Analyses (TaRA) using threat modeling frameworks like Attack Tree, STRIDE, PASTA, LINDDUN, CVSS, hTMM, VAST and OCTAVE. Developed cutting-edge security concepts, executed robust V&V processes (VA/PT, CIS Benchmarking, Fuzzing), and embedded security into Agile workflows.
  - **Compliance Frameworks**: Deep expertise in NIST, ISO 27001, ISO 21434, FDA Pre/Post Market, and ISA/IEC 62443.
  - **SOC Leadership**: Directed Global Security Operations Centers (SOC) leveraging multiple SIEM, SOAR, and UEBA tools for real-time threat detection and automated response. Achieved 30% efficiency and $4M in revenue through AI-driven automation.
  - **DevSecOps Practices**: Championed "Security by Design and Default" with advanced DevSecOps practices. Embedded SAST/DAST tools and integrated security into CI/CD pipelines using Docker, Kubernetes, and GitHub within Agile frameworks.
  - **Penetration Testing**: Hands-on expertise in APT red teaming, exploit development, and security assessment methodologies.
  - **Hardware Security:** Designed advanced Hardware Security Modules (HSM) featuring secure boot, cryptographic acceleration, and TrustZone technology. Implemented tamper detection, lockstep cores, ECC, and safety islands solutions.
  - **Enterprise and Cloud Security**: Expertise in secure enterprise architectures and multi-cloud protection (AWS, Azure, GCP). Skilled in IAM (SAML, OAuth, Zero Trust) and cloud-native security. Proficient in CSPM tools such as Prisma Cloud and AWS Security Hub.
- **Data Privacy:** Recognized Fellow of Information Privacy (FIP) by IAPP, showcasing a deep commitment to advancing data privacy.
  - **Compliance and Regulatory Leadership**: Driving GDPR compliance, leading gap analyses, DPIAs, and Transfer Impact Analysis (TIA) to ensure adherence to data subject rights, breach notifications, secure transfers, and lawful processing principles**.**
- **Privacy-Enhancing Technologies (PETs)**: Expertise in PETs, such as Differential Privacy (DP), Homomorphic Encryption (HE), Federated Learning (FL), Zero-Knowledge Proofs (ZKP), Secure Multi-Party Computation (SMPC), Synthetic Data Generation (SDG), **Programming Skills and Tool Development**: Proficient in Python, C/C++, Java, and adhering to security standards like OWASP, CERT, and MISRA.
- **Project/Program Management:** Certified PMP and Scrum Master with expertise in managing large-scale projects, cross-functional teams, and $800M+ budgets using Agile, DevOps, and DevSecOps methodologies for seamless delivery.
- **Machine Learning**: Expertise in applying AI/ML for cybersecurity, including anomaly detection, threat intelligence, and incident response. Proficient in NLP, neural networks (ANN, CNN, RNN, Transformers), and Python libraries such as TensorFlow, PyTorch, Scikit-learn, and Pandas. Skilled in feature engineering, hyperparameter tuning, and deploying ML models with Docker and Kubernetes.
- **Blockchain**: Expertise in developing secure, decentralized systems for supply chain, healthcare, and finance. Skilled in smart contracts (Solidity, Hyperledger, Ethereum), cryptographic protocols (ECC, ZKP), and consensus mechanisms (PoW, PoS, PBFT).
- **GRC Excellence:** Aligned security with legal and organizational standards through Governance, Risk, and Compliance programs.
- **Global Speaker and Thought Leader**: Invited speaker at global forums like DSCI, ARAI, BIS, and IEEE.

Amazing talent with a mission driven zeal for achieving deadlines. Personifies simplicity in talk but is able to dissect complex problems into finite steps. He is a class apart- **Dr Shashwat Raizada, Director Cybersecurity, Marelli**

WORK HISTORY

BOSCH (2019-Present): *Bosch is a global leader in technology and services, specializing in automotive and industrial technology.*

Program Manager & Engineering Manger | Bosch (Sep 2019 – Present), Bengaluru, India

- **Strategic Leadership**: Spearheaded global cybersecurity initiatives, driving 10x revenue growth leading a team of 250+ professionals.
- **Go-To-Market Excellence**: Orchestrated the launch of a $60 million Go-To-Market (GTM) business delivering innovative solutions
- **Portfolio Expansion**: Collaborated with 50+ clients across Automotive, Cloud, Enterprise, Healthcare, OT, Digital Twin, Industry 4.0, and Fintech, driving cybersecurity portfolio expansion and capturing new markets.
- **Automotive Cybersecurity Leadership**: Directed advanced cybersecurity programs aligned with ISO/SAE 21434, driving initiatives for Software-Defined Vehicles (SDVs), High-Performance Computers (HPCs), and Advanced Driver Assistance Systems (ADAS)
- **Robust Automotive Security Deployment**: Designed comprehensive security concepts leveraging AUTOSAR frameworks, including SecOC, CSM, HSM, Secure Boot, and firewalls, delivering end-to-end protection. Collaborated with 20+ automotive clients, achieving compliance with UNECE WP.29, SAE J3061, and TISAX**.** Achieved $6 million+ in revenue and strengthened client relationships
- **iTrams Security Architecture Leadership**: Directed the security architecture for Bosch's flagship iTrams program, embedding advanced security measures across multiple platforms to enhance resilience and integrity.
- **Healthcare Compliance**: Achieved **100% regulatory compliance** for healthcare clients aligned to FDA Post/Pre-market requirements
- **OT Security**: Fortified ICS, SCADA, DCS, and PLC systems with NIST SP 800-82 and ISA/IEC 62443, ensuring resilient industrial operations
- **Fintech Cybersecurity Leadership**: Delivered PCI-DSS-compliant solutions, aligned frameworks with RBI, CERT-In, and SEBI mandates.

Indian Navy (1994-2019): *The Indian Navy is the naval branch of the Indian Armed Forces.*
Chief Information Security Officer (CISO) | Indian Navy (2016– 2019), New Delhi, India
- **Strategic Leadership**: Directed cybersecurity strategies for $600M+ projects
- **Risk Management**: Led risk assessments, technology acquisitions, and network security enhancements to fortify infrastructure
- **SOC Oversight**: Managed 24/7 SOC operations, deploying advanced monitoring and incident response systems
- **Business Continuity**: Developed BCP/DRP plans and enforced compliance to elevate security standards

Head of Department – CERT | Indian Navy (2015–2016), Mumbai, India
- **CERT Operations**: Strengthened Navy defenses against **APTs**, enhancing breach response and operational continuity
- **Incident Response**: Directed investigations, engineered corrective measures, and mitigated risks with forward-thinking strategies

Joint Director – Combat Management System (CMS) | DRDO (2010–2015), New Delhi, India: *The Defence Research and Development Organisation (DRDO) is an agency of the Government of India.*
- **'Make in India' initiative**: Directed $400M advanced CMS, integrating advanced weaponry, radars, and communication systems.
- **Program Management**: Managed 400 developers and engaged with 200+ stakeholders

Chief Engineer – Frontline Warships | Indian Navy (1999–2010), Mumbai, Vishakhapatnam & Kochi, India
- **Operational Leadership**: Directed maintenance of advanced systems for peak performance in maritime conditions
- **Team Leadership**: Unified **450+ personnel**, fostering collaboration and setting benchmarks for high-stakes performance.

EDUCATION

PhD (Cyber Security) Scholar	Indian Institute of Technology (**IIT Jodhpur**)	2021
MTech (Communication)	Indian Institute of Technology (**IIT Madras**) |2007
PG Diploma Data Science	International Institute of Information Technology (**IIIT Bangalore**) |2019
PG Diploma in Cyber Law & Cyber Forensics	National Law School of India University (**NLSIU Bangalore**) |2020
PG Diploma Business Management	Indian Institute of Management (**IIM Indore**)	2019
Elevate-Bosch Leadership Development Program	Indian School of Business (**ISB Hyderabad**)	2021

PUBLICATIONS : Published influential papers in IEEE Journals/Conferences, in areas cybersecurity, cloud Security, IDS/IPS, and Data Privacy.

CERTIFICATIONS

Cybersecurity	-	Certified Information Systems Security Professional (**CISSP**)|**ISC**[2]
	-	Certified Information Systems Auditor (**CISA**)|**ISACA**
	-	Computer Hacking Forensic Investigator (**CHFI**)|**EC- Council**
	-	Certified SOC Analyst (**CSA**) |**EC- Council**
	-	Certified Ethical Hacking (**CEH**) |**EC- Council**
Information Privacy	-	Certified Information Privacy Manager (**CIPM**)|**IAPP**
	-	Certified Information Privacy Professional(CIPP/E) |**IAPP**
Project Management	-	PMI Project Management Professional (**PMP**)|**PMI** & PMI Disciplined Agile Scrum Master|**PMI**
Cloud	-	AWS Certified **Security-Specialty** & AWS Solution **Architect Associate**|**AWS**
Cybersecurity Management System (CSMS):	-	**ISO 27001-2022**: Information Security Management Systems Auditor|**GSDC**
	-	**ISO 22301:2019**: Business Continuity Management Systems Auditor|**GSDC**
	-	**ISO 20000:2018**: IT Service Management Systems Auditor|**GSDC**
Automotive Security	-	**CACSP (Certified Automotive Cyber Security Practitioner)** as per ISO/SAE 21434 (Road Vehicles - Cyber Security Engineering) |**TUV**
	-	**ISO 21432:2021**: Road Vehicle Cyber Security|**Vector**
Quantum Computing	-	IBM Quantum-Safe Cryptography; IBM Quantum Information ; Algorithm Design: QC|**IBM**
Information Technology & Financial	-	**IoT** Practitioner|**NIPUN**; **Industry 4.0**|**ARCSTONE**; IT Information Library Foundations Certification(**ITIL**)|**AXELOS**; Cisco Certified Network Associate (**CCNA R&S**)|**CISCO**; Six Sigma **Green Belt**|**KPMG**; Certified Energy Manager(**CEM**)|**Bureau of Energy Efficiency(BEE**

AWARD AND AFFILIATIONS
- **Fellow of Information Privacy (FIP):** Recognized for exceptional contributions and advancing the field of information privacy.
- **Outstanding Leadership Award 2023**: Recognized for exemplary leadership, spearheading initiatives, and inspiring excellence at Bosch.
- **Invited Speaker**: Featured at prestigious forums including DSCI, ARAI, BIS, and IEEE conferences.
- **Advisor to Bosch India**: Provided strategic expertise on Privacy Enhancing Technologies (PET) and Post-Quantum Cryptography (PQC).
- **ISO/SAE 21434 Lead Assessor**: Certified Lead Assessor at Bosch for ISO/SAE 21434:2021 (Road Vehicles Cybersecurity Engineering)

VOLUNTEER : Disaster and Humanitarian Relief; Sustainability Advocate for renewable energy; Cybersecurity and Privacy Trainer

LANGUAGE PROFICIENCY: English (Fluent); Russian & German (Intermediate)

REFERENCES

LinkedIn Profile	Present Role	Relation
Dr Shashwat Raizada	Director Cybersecurity, Marelli	Senior and reporting head at Bosch
Muni kumar Pappoppula	Engineering Manager, Bosch	Senior and didn't manage directly
Parth Trivedi	Expert- Cybersecurity, Bosch	Subordinate