

PRASHANT VAJPAYEE

Senior Product Manager – Data, Secure Integration & Artificial Intelligence

Dallas, Texas

Research Areas: Artificial Intelligence, Agentic AI, Responsible & Trusted AI, Cybersecurity, Cyber Value-at-Risk (CVaR), Cognitive Cybersecurity, IoT Security, AI Risk Prediction, Human-Centered AI, Data Integrity, Secure Integration, AI Governance, STEM Cybersecurity Education

PROFESSIONAL PROFILE

Researcher and Senior Product Manager with **20+ years of experience** at the intersection of Artificial Intelligence, Data Science, Cybersecurity, Enterprise Integration, and Digital Transformation. Current doctoral research focuses on AI-enabled cybersecurity, Cyber Value-at-Risk (CVaR), cognitive cybersecurity, IoT security, responsible AI, and secure scientific innovation. Research integrates AI, Agentic AI, human-centered design, risk analytics, and cybersecurity to address challenges in intelligent transportation, IoT, cloud environments, STEM education, and trustworthy digital systems. Active in **Sigma Xi and IEEE** through research leadership, peer review, mentoring, scientific service, and interdisciplinary outreach.

1. EDUCATION

University of North Texas — Ph.D., Data Science (AI & Cybersecurity)

August 2023–Present

The University of Texas at Dallas — MBA, Information Technology Management

August 2013–May 2015

National Institute of Technology, Kurukshetra — B.Tech. Electrical Engineering

August 2001–June 2005

2. PROFESSIONAL EXPERIENCE

Salesforce, Inc. — Senior Product Manager, Legal, Security & Compliance (Data, Integration & AI)

Dallas, TX | March 2020–Present — Lead enterprise AI, data, secure integration, cybersecurity, governance, and compliance initiatives spanning Agentic AI, RAG, LLMs, MuleSoft, Snowflake, Tableau, APIs, and enterprise analytics.

First Tek, Inc. — Management Analyst, Commercial Card Technology Product Management

San Francisco Bay Area | November 2018–February 2020 — Led commercial card technology product strategy, API/SSO integrations, data and payment platforms, technical requirements, and Agile transformation.

Orion Business Innovation — Product Owner, Digital Transformation & Enterprise Integration

Greater New York City Area | July 2016–November 2018 — Led digital transformation, API integration, AI/ML-enabled solutions, accessibility, and Agile product delivery for enterprise clients including Aflac, American Water, and ETS.

Ignite Sourcing — Business/Product Analyst

Dallas/Fort Worth Area | July 2014–July 2016 — Delivered telecommunications, billing, OSS, CRM, e-commerce, and automation initiatives for AT&T and T-Mobile through business analysis and process optimization.

Mphasis — Delivery Module Lead / System Analyst

Boise, ID & Bengaluru, India | October 2010–July 2014 — Led software engineering and test automation for HP printer/scanner products, including firmware solutions that reduced manual testing effort by approximately 40%.

IBM — Product/Application Developer

Bengaluru, India | Earlier Career — Developed enterprise software, system engineering, automation, and application solutions across large-scale technology environments.

Subex — Product/Application Developer

Bengaluru, India | Earlier Career — Developed telecommunications fraud management, network, and enterprise software solutions supporting large-scale telecom operations.

Wipro Technologies — Product/Application Developer

Bengaluru, India | July 2005–November 2012 — Delivered software development, system integration, automation, telecom fraud management, and mobile number portability solutions.

3. RESEARCH & R&D LEADERSHIP

Enterprise AI strategy, Agentic AI, LLMs, RAG, Trusted AI, Responsible AI, cybersecurity, CVaR, secure integration, data governance, MuleSoft, Snowflake, Tableau, Airflow, APIs, analytics, AI governance, privacy, compliance, and intelligent automation.

Research Leadership: AI-enabled anomaly detection, cyber-risk modeling, IoT security, transportation cybersecurity, cloud security, cybersecurity education, human-centered AI, and responsible AI.

4. RESEARCH SUPPORT & FUNDING

Sigma Xi Diversity Grant — Principal Investigator

Cyber and Digital Awareness in the Era of AI for Workforce Enablement, Diversity, and Inclusion

Award: \$1,000 | Status: Awarded

Interdisciplinary outreach initiative focused on AI literacy, cybersecurity awareness, workforce enablement, diversity, inclusion, and responsible adoption of emerging technologies.

Sigma Xi SMEE Grant — Principal Investigator

Responsible AI, Law, and Data Integrity: A Cross-Disciplinary Framework for Secure Scientific Innovation

Award: \$2,000 | Status: Awarded

Cross-disciplinary initiative examining Responsible AI, cybersecurity, legal considerations, data integrity, governance, and secure scientific innovation.

5. SELECTED PUBLICATIONS

2026

1. **Vajpayee, P.**, E. Eze, T. Raheem, N. Meka Sri Durg, F. M. Khan, and G. Hossain. “Developing Cybersecurity Awareness in 9th–12th Grades Students through Scenario-Based Learning.” *F1000Research*, vol. 15, p. 852, 2026.
2. **Vajpayee, P.** and G. Hossain. “Responsible Agentic AI for Effective Cyber-Defense and Ethical Safety.” *Ethical AI and Data Science: Building Trustworthy and Transparent Systems*, p. 52, 2026.
3. **Vajpayee, P.**, B. Tandan, and G. Hossain. “An AI-Enabled Zero-Trust Framework for Security Validation Platforms,” 2026.
4. **Vajpayee, P.** and G. Hossain. “Cyber Value at Risk and Cognitive Estimation: A Human-Centered Design Approach.” *International Conference on Computer Science and Health Engineering*, pp. 19–34, 2026.

2025

5. **Vajpayee, P.**, C. Karuppiah, and G. Hossain. “Insider Threat Pattern Detection Using Deep Learning to Evaluate Cyber Value at Risk (CVaR).” *2025 13th International Symposium on Digital Forensics and Security (ISDFS)*, pp. 1–5, 2025.

6. B. Tandan, **P. Vajpayee**, and G. Hossain. “Explaining Cyber Risks in Transportation 5.0: A Data Driven Approach.” *2025 IEEE 4th International Conference on AI in Cybersecurity (ICAIC)*, pp. 1–8, 2025.
7. **P. Vajpayee**, T. Raheem, and G. Hossain. “Human Centered AI and Cybersecurity: An Innovative Approach to Manage Cyber Risk in Transportation 5.0.” *2025 IEEE International Conference on Electro Information Technology (eIT)*, 2025.
8. **Vajpayee, P.**, B. Anderson, and G. Hossain. “Zero Trust and Cyber Risk Modeling for Intelligent School Transportation Systems (ISTS).” *2025 IEEE International Carnahan Conference on Security Technology (ICCST)*, pp. 1–6, 2025.
9. **Vajpayee, P.** and G. Hossain. “A Simplified Mathematical Guide to Cyber Assets, Value, and Risk for K–12 Students.” *2025 IEEE Integrated STEM Education Conference (ISEC)*, pp. 1–2, 2025.
10. **Vajpayee, P.** and G. Hossain. “K–12 Education: Explaining Cyber Value at Risk Using Electrical K-Map and Truth Table.” *2025 IEEE Integrated STEM Education Conference (ISEC)*, pp. 1–4, 2025.

Additional Selected Publications

Vajpayee, P. and G. Hossain. “Reduction of Cyber Value at Risk (CVaR) through AI Enabled Anomaly Detection.” *SoutheastCon 2024*, pp. 623–629, 2024.

K. Bissadu, G. Hossain, and **P. Vajpayee**. “Agriculture 5.0 Cybersecurity: Monitoring Agricultural Cyber Threats with Digital Twin Technology.” *2024 IEEE World AI IoT Congress (AIIoT)*, pp. 0252–0258, 2024.

Vajpayee, P. and G. Hossain. “Risk Assessment of Cybersecurity IoT Anomalies through Cyber Value at Risk (CVaR).” *2024 IEEE World AI IoT Congress (AIIoT)*, pp. 77–83, 2024.

Vajpayee, P. and G. Hossain. “Cybersecurity Education in High School: Exploring Cyber Assets, Cyber Value at Risk, and Authentic Assessment.” *2024 IEEE Frontiers in Education Conference (FIE)*, pp. 1–9, 2024.

Vajpayee, P. and G. Hossain. “Multi-Tenant Cloud Security—Risk Prediction through Cyber-Value-at-Risk (CVaR).” *2024 12th International Symposium on Digital Forensics and Security (ISDFS)*, pp. 1–7, 2024.

Vajpayee, P. and G. Hossain. “Cognitive Cybersecurity in Transportation 5.0 and Supply Chain: A Multi-Objective Optimization Framework.” *2024 IEEE International Conference on Electro Information Technology (eIT)*, 2024.

Vajpayee, P., C. Karuppiyah, and G. Hossain. “Chat GPT and Cyber Risks: Need of Custom Large Language Models.” *2024 IEEE 3rd International Conference on Data, Decision and Systems (ICDDS)*, 2024.

E. Hassan, G. Hossain, and **P. Vajpayee**. “Reducing Cyber Risks in IoT Device Resource Management: A Probabilistic Banker’s Algorithm Approach.” *2024 IEEE World AI IoT Congress (AIIoT)*, pp. 205–211, 2024.

Vajpayee, P. and G. Hossain. “Cognitive Bias in Cyber-Value-at-Risk: Identification and Mitigation Approach.” *Proceedings of the 2024 Computers and People Research Conference*, pp. 1–2, 2024.

Z. S. Pomare, G. Hossain, D. S. Maguluri, **P. Vajpayee**, and G. Prybutok. “ChatGPT in the Context of Dementia Care and Cognitive Support.” *2024 IEEE International Conference on Electro Information Technology (eIT)*, 2024.

6. SYNERGISTIC ACTIVITIES

- **Scientific Leadership:** Vice President and Board Member, Sigma Xi – University of Texas at Dallas Chapter, supporting interdisciplinary scientific engagement and research community development.
 - **Responsible & Trusted AI:** Integrates AI, cybersecurity, data governance, privacy, legal considerations, and risk management to advance responsible AI and secure scientific innovation.
 - **Cybersecurity & STEM Education:** Develops research and educational approaches that make cybersecurity risk, CVaR, and AI concepts accessible to K–12 and broader communities.
 - **Scientific Peer Review:** Reviewer for IEEE conferences and journals, including *Computers & Security* (Elsevier), IEEE FIE, IEEE EDUCON, IEEE eIT, SIGMIS, and ISOCSETI.
 - **Knowledge Transfer & Innovation:** Connects academic research with enterprise technology through AI product leadership, secure data platforms, enterprise integration, and cybersecurity innovation.
-

7. MENTORING & COMMUNITY IMPACT

Mentors graduate students, researchers, early-career professionals, entrepreneurs, and technology teams in AI, cybersecurity, data science, product management, enterprise architecture, and responsible innovation; serves as **Lead Business Mentor, SCORE Dallas**, and **Business Advisor, Dallas Entrepreneur Center**, while supporting Sigma Xi and STEM/cybersecurity education initiatives.

8. PROFESSIONAL SERVICE & REVIEW ACTIVITIES

Journal Reviewer: *Computers & Security* (Elsevier), *Journal of Information & Knowledge Management*, *Journal of Infrastructure Policy and Development*.

Conference Reviewer: IEEE EDUCON, IEEE Frontiers in Education (FIE), IEEE eIT, SIGMIS CPR, ISOCSETI, IEEE AI/cybersecurity conferences, and Sigma Xi research activities.

Review Years: 2024–2025 and continuing.

9. PROFESSIONAL MEMBERSHIPS & LEADERSHIP

- **Sigma Xi** — Vice President & Board Member, University of Texas at Dallas Chapter; Full Member
 - **IEEE** — Senior Member
 - **International Academy of Artificial Intelligence Sciences (AAIS)** — Senior Member
 - **Institute of Analysts and Programmers (IAP)** — Fellow
-

10. HONORS & AWARDS

- **Salesforce AI Ideathon Winner**, 2024
 - **AIOT Best Presenter Award**, 2024
 - **Dean's Impact Scholarship**, The University of Texas at Dallas, 2015
 - **Summit Award**, Mphasis, 2014 — Two-time recipient
-

11. SELECTED CERTIFICATIONS & PROFESSIONAL TRAINING

Certifications: Salesforce AI Associate, SAFe Agile Product Manager, LeanIX Enterprise Architecture Practitioner, Certified ScrumMaster, PRINCE2 Project Management, Certified Blockchain Expert, HubSpot Inbound Certification.

Training: Big Data Analytics, AWS Cloud Computing, Cybersecurity for Managers (MIT), CISSP Coursework, Cybersecurity Boot Camp, Salesforce Data Cloud, Agentforce, Power BI, Tableau, Google Analytics, Blockchain, Salesforce Sales Cloud and Service Cloud.

12. TECHNICAL & PROFESSIONAL EXPERTISE

AI & Analytics: AI/ML, Agentic AI, RAG, LLMs, SAS, Python, R, Tableau, Power BI

Data & Integration: MuleSoft, Snowflake, Airflow, IICS, APIs, ETL, Data Governance

Cybersecurity: Cyber Risk, CVaR, Zero Trust, DLP, SSO, Vulnerability Management, Cloud

Security

Enterprise Platforms: Salesforce, MS Dynamics, ServiceNow, UiPath

Development: Java, C++, C, Python, JSON, XML, HTML, CSS, Shell, Perl

Tools: JIRA, Git, SVN, Postman, Swagger, SOAP, HP ALM, Bugzilla

Databases/OS: Oracle, SQL Server, SSIS, UNIX, Linux, Windows, HP-UX, Solaris

Methods: Agile, Scrum, SAFe, Waterfall, Product Management, Enterprise Architecture

13. RESEARCH PROFILES

Google Scholar: Prashant Vajpayee

<https://scholar.google.com/citations?user=33aQG8gAAAAJ&hl=en>

ResearchGate: Prashant Vajpayee

https://www.researchgate.net/profile/Prashant-Vajpayee?ev=hdr_xprf
