RAYMOND S. NELSON, MBA

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PROFESSIONAL PROFILE

Solutions Architect | AI/ML & Cloud Delivery | Public & Private Sector Impact

Seasoned technical and strategic solutions leader with deep experience delivering mission-critical systems across AI/ML, cloud, and edge infrastructure. Proven success driving digital transformation for public and private sector clients by aligning engineering, program management, and delivery functions to business outcomes. Adept at modernizing legacy platforms, leading cross-functional teams, and translating complex technical requirements into scalable, cost-effective solutions. Skilled in stakeholder engagement, solution architecture, and post-sale implementation with a focus on clarity, process rigor, and measurable value. Brings a unique blend of systems thinking, customer empathy, and executional depth.

CORE COMPETENCIES

Solutions Architecture (SaaS, Cloud, AI/ML) | Agile Program & Delivery Leadership | Cloud Infrastructure (AWS, VPC, S3, Greengrass) | Enterprise Software Integration (ServiceNow, SmartSheet, TestRail) | Data Pipeline Design & Automation | Edge Computing & IoT Systems | AI/ML Deployment (OpenAI, Scikit-learn) | Technical Roadmapping & Prioritization | Digital Transformation Strategy | Post-Sale Implementation & Customer Success | Cross-Functional Team Leadership | Stakeholder & Executive Alignment | Regulated Environments (DoD, NOAA, FAA) | Platform Scalability & System Optimization | Operational Efficiency & Process Design

PROFESSIONAL EXPERIENCE

Tesla Laboratories - *Arlington, VA* 2023 - Present
Lead Solutions Architect *(formerly System Engineer & Technical Lead)*

Promoted through multiple roles to lead engineering, delivery, and stakeholder alignment for NOAA's national aviation weather modernization program. Oversaw system architecture, Agile process design, and technical delivery across edge IoT and cloud infrastructure.

- Led architecture and deployment of 250+ next-gen weather sensor sites across the U.S., integrating AWS Greengrass, Linux-based edge devices, and Cloudflare-encrypted networking.
- Built an automated ETL pipeline between TestRail and SmartSheet to accelerate testing and cross-functional coordination.
- Modernized project delivery by rewriting the program playbook with Agile principles, improving task visibility and execution.
- Managed a 7-person multidisciplinary team and facilitated quarterly stakeholder meetings with NOAA and FAA.
- Designed and fielded ruggedized test systems to simulate legacy sensor data, enabling advancement of a $5.7M FAA program milestone.

C3.ai - *Arlington, VA* 2022 - 2023
Senior Director, Strategic Solutions & AI Delivery

Led go-to-market strategy and solution delivery for AI/ML applications across federal defense, intelligence, and civilian agencies. Bridged technical leadership with executive engagement to accelerate platform adoption in mission-critical environments.

- Closed $3M in net-new revenue in 8 months by leading technical pre-sales and value messaging to senior public sector stakeholders.
- Developed white papers articulating the business value of C3's model-driven architecture, with a focus on ML pipeline efficiency and data integration.

- Led an 8-member team to deploy a defense logistics AI application on DoD's Advana platform, aligning Agile development with mission needs.
- Built an energy analysis pipeline integrating REST APIs, CSVs, and AWS S3, and co-developed a natural language interface using OpenAI (davinci-003).
- Consulted DoD, IC, and federal clients on digital transformation strategies and platform scalability.

Peraton - *Chantilly, VA* 2015 - 2022
Product Manager & Senior Software Engineer

Directed product strategy and engineering delivery for classified satellite scheduling systems deployed on AWS. Managed $20M in program scope, led Agile teams across three facilities, and delivered measurable improvements in velocity, performance, and customer value.

- Led a 28-member engineering team to deliver a containerized satellite scheduling optimization platform in a SCIF environment on AWS.
- Supervised Agile development across classified, unclassified, and remote teams; increased sprint velocity by 20% via process reforms and tooling.
- Defined product roadmap and aligned stakeholders through monthly planning sessions; maintained progress across a 5-year delivery cycle.
- Implemented data science solutions using Python, scikit-learn, and Apache Storm for satellite imagery analytics.
- Built secure full-stack apps (AngularJS, PostgreSQL, Spring Boot) to meet complex classified requirements and streamline operational workflows.
- Co-authored a white paper on agent-based satellite modeling used in a $2M business proposal.

WILLCOR - *College Park, MD* 2012 - 2015
Technical Delivery Manager

Delivered engineering analysis and product development for Navy and DoD clients, with a focus on logistics modeling, cost optimization, and obsolescence risk mitigation.

- Developed a genetic algorithm–based solution for fleet modernization planning, improving cost-efficiency across U.S. Naval systems.
- Led a 4-person team to build a logistics finance web app in R (Google App Engine), securing ~$250K in follow-on contracts.
- Identified ~$5M in potential savings through a life-cycle cost mitigation study of the Navy's Vertical Launch System (VLS).

Earlier Roles

Analyst & Researcher, CALCE - University of Maryland (2007–2012)
Technical Consultant, KT Consulting Inc. (2005–2006)

Education and Executive Development Programs

PhD, Engineering, University of Maryland (2012) **| MBA,** Cornell University, Johnson Graduate School of Management (2021) **| M.S. & B.S., Engineering,** University of Maryland (2010, 2007)

Executive & Technical Education: Applied Data Science, MIT (2023) | Product Management, eCornell (2021) | Project Management, eCornell (2020) | Club Founder: Marketing, Entrepreneurship & Technology (MET), Cornell Tech (2019)