David M. Everly Jr

Software Systems Engineer • Acute Care Nurse Practitioner

MSN, CRNP, AGACNP-BC

https://www.dmeverly.com

PROFESSIONAL SUMMARY

I am a Software Systems Engineer and Acute Care Nurse Practitioner with over a decade of experience in Critical Care and Emergency Medicine. I have extensive experience operating under pressure in environments where risk is real and facts are ambiguous. I understand risk, trust, and safety and leverage this to design practical software systems that are intentionally built to streamline workflows, minimize risk, and mitigate the impact of system failures.

SYSTEMS & TECHNICAL FOCUS

Secure system design · defensive architecture · zero trust · adversarial input handling · applied machine learning · workflow automation · reliability under constraint

SELECTED ENGINEERING PROJECTS

SynapSys — Failure-Aware LLM Orchestration Framework

• Designed modular orchestration layer enforcing validation, guardrails, and bounded repair

• Explicitly models failure modes, misuse, and controlled degradation around probabilistic output

• Enforced input and output validation layers with deterministic fallback behavior

Portfolio Chatbot — SynapSys Reference Implementation

• Built retrieval-augmented LLM system with pre/post guard pipelines and deterministic fallback

• Demonstrates trust-boundary enforcement and guarded interaction patterns

Additional Engineering Work

• Built ECG classification models from raw waveform data with class imbalance normalization

• Developed constraint-based scheduling automation system using simulated annealing

• Practical study of network segmentation, service isolation, and basic adversarial security testing

CLINICAL & OPERATIONAL EXPERIENCE

WellSpan Pulmonology & Critical Care Medicine — Nurse Practitioner   2019–Present
• Manage high-acuity patients under time pressure, ambiguity, and evolving conditions

• Perform advanced procedures and lead real-time clinical decision-making

• Identify workflow, documentation, and system failure points impacting safety and efficiency

• Preceptor for advanced practice clinicians and trainees

Hershey Medical Center Emergency Medicine — Nurse Practitioner   2017–2019
• Emergency medicine practice in high-volume, safety-critical settings

Registered Nursing Roles   2013–2017
• Progressive care, emergency medicine, cardiopulmonary step-down, clinical instruction

EDUCATION

M.S. Computer Science (Anticipated May 2026) — Drexel University	2022–2026
Graduate Certificate, Computational AI — Drexel University	2024–2025
M.S. Nursing — The Pennsylvania State University	2015–2017

CREDENTIALS & RECOGNITION

CompTIA Security+	2026
ISC2 Cybersecurity Certified	2025
Epic Physician Builder	2024
Adult-Gerontology Acute Care Nurse Practitioner-Board Certified	2017
Registered Nurse	2013
Advanced Practice Provider of the Year — Hershey Medical Center	2019
Graduate Fellowship — The Pennsylvania State University	2023
ENRS Abstract	2017