Amarda Shehu, PhD

naril.ai — Founder & CEO | ZymoScan — Co-Founder & CTO | GMU — Inaugural VP & Chief AI Officer

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Executive Profile

Founder & CEO, **naril.ai**; Co-Founder & CTO, **ZymoScan**; inaugural **VP & Chief AI Officer**, George Mason University. AI strategist and scientific-AI builder with 20 years leading enterprise adoption and use-inspired R&D. Co-architected **PatriotAI** (secure access to 1,800+ **GenAI models**) with university-wide guidelines and a 70+-member taskforce serving a **40k+ community**; designed **AI literacy** programs and stood up **new centers** and a **public-private AI-in-Government Council**. Built and led an **AI R&D** lab for nearly two decades, graduated 15 PhD and 8 MS students, mentored 40+ undergraduates, and authored **200+ peer-reviewed technical articles,** translating foundational AI advances to products and mission outcomes. Former **NSF Program Director** and **Associate VP for Research** (Institute for Digital InnovAtion); **AIMBE Fellow**, **VASEM member**, and IEEE Senior Member.

Highlighted Boards & Councils

- DOE Joint Genome Institute Advisory Committee (JGI) — Member
- NIST AISIC Working Groups — Generative AI Risks; GAI Profile Case Studies
- University of Virginia ECE Advisory Board — Member
- External Advisory Board, NSF Center for Computer-Assisted Synthesis (C-CAS) — Member
- Commonwealth Science & Technology Ethics Policy (STEP) Collaborative — Advisory Board Member
- Center for Digital Education Higher-Ed AI Council — Founding Member
- Northern Virginia Technology Council (NVTC) Impact AI — Steering Committee Member

Signature Strengths

Triple-rare leader: CTO-grade technical × NIST-caliber governance × education at scale.

- **CEO with CTO-grade technical depth** (rare for CEOs) with **200+ peer-reviewed** works and **20+ years** running an AI R&D lab, mentoring **15 PhD, 8 MS, 40+ undergrads**.
- **Enterprise GenAI platforming at scale:** Co-architected **PatriotAI** with secure access to **1,800+** models; authored institution-wide **AI Guidelines** (1st in Virginia); led a **70+**-member taskforce.
- **Governance & policy** (rare for deep technologists)**:** NIST **AI RMF** operationalization; member, **NIST AISIC** working groups; advisory roles include **DOE JGI Advisory Committee**, **National Academies** biosecurity working group, **SCHEV** EO-30 taskforce, and **ACM USTPC**.
- **AI literacy & education at scale** (rare for anyone)**:** University-wide literacy scaffold; led design and teaching of national exemplar of undergraduate AI entry course **AI4ALL** (launched Fall 2025); led design and approval of **Virginia's first MS in AI** (launched Fall 2025).
- **Ecosystem builder & convener:** Founded/led cross-sector centers (CAIIEC; ISEAI; CRC; CAHMP) and launched **AI-in-Gov Council** to align R&D and workforce with public- and private-sector priorities.
- **Translation & partnerships:** Startup CTO (**ZymoScan**); PI/co-PI on **NSF**, **DoD Minerva**, **AFRL Digital Transformation Battle Lab**, **STTRs**, **SBA, DOE,** and **Commonwealth** awards.
- **Executive communication & influence: 100+** invited talks/keynotes; **AIMBE Fellow (2022)**, **VASEM Member (2024)**, **IEEE Senior Member (2025)**.

Selected Impact

- Co-founded ZymoScan to accelerate pediatric rare-disease diagnostics with **AI x genomics**; as CTO, defined product and AI/ML roadmap, early technical architecture, and clinical workflow integration.
- Co-architected **PatriotAI**: in partnership with Microsoft and Cloudforce secure access to 1,800+ GenAI models with policy guardrails; paired with leading a first-in-Virginia a university-wide **AI Guidelines** and a 70+ member AI Taskforce serving a 40k+ diverse community of staff, instructors, and students.
- Designed **AI literacy** scaffold and course (AI4ALL), co-led the design of the Ethics and AI undergraduate minor, and led the design and approval of Virginia's first MS in AI.
- Stood up signature cross-disciplinary centers (CAIIEC; ISEAI; CRC; CAHMP) and an **AI-in-Gov Council** to align R&D and workforce with industry and federal needs in AI and at the intersection of AI with human-machine teaming, cybersecurity, infrastructure security, and business innovation.

Experience

naril.ai — Founder & CEO | 2025–Present

Spark at the AI Frontier: Where Possibility Takes Shape

- **Executive AI Advisory & Transformation (Fractional CAIO):** vision & roadmaps, strategy & governance, GenAI platforms, evaluation & safety, policy & risk controls, workforce enablement, and high-ROI use cases across the science & engineering of AI
- **Investor AI Diligence**: Narrative + technical risk lens, demos, and memo-ready insights.
- **AI Literacy & Workforce**: Tailored primers and workshops for boards, leaders, and teams.

ZymoScan — Co-Founder & CTO | 2025–Present

Epistasis-Aware Clinical AI for Same-Day Newborn Screening

- Leads development of AI-native pipelines, technical strategy and product roadmap for AI-assisted rare-disease pediatric diagnostics to clinician-friendly decision support.
- Establishes clinical workflow integration and defines evaluation framework and quality criteria.
- Recruits and mentors technical team and oversees vendor selection and cloud/security architecture.

George Mason University — VP & Chief AI Officer (2024-); College and Engineering and Computing — Associate Dean for Research (2025-) | Professor of Computer Science (2008-)

- Ideated and led whole-of-institution strategy (Integrate, Inspire, Innovate, Impact); published AI guidelines and launched AI Taskforce (>70).
- Launched PatriotAI with Microsoft & Cloudforce; secured governance guardrails and analytics for adoption at scale.
- Designed university-wide AI literacy scaffold, AI4ALL course first in Virginia (launched in Fall 2025), and first-in-state MS in AI (approved by SCHEV, launched Fall 2025).
- Built cross-college/sector centers and an AI-in-Gov Council; advanced partnerships, fundraising, and translational programs.
- Directs lab advancing knowledge-grounded and modern AI; 200+ refereed publications; [Google Scholar](#).

National Science Foundation — Program Director (IPA), IIS/III | 2019–2022

- CISE Lead, NSF-wide **Molecular Foundations for Biotechnology** (MFB) Working Group (2021–2022): led CISE conceptualization and solicitation revision; **made AI a central methodological pillar**; recognized with the NSF Director's Award (Group) for the MFB WG (2022).

- Led HDR: **Data Science Corps** and data-science education/training initiatives from concept to clearance, coordinating cross-directorate panels, portfolio analysis, budgets, and communications.
- CISE coordinator for the **COVID-19 RAPID** portfolio; organized national symposia and represented CISE on interagency working groups in data/AI; recognized with the NSF Director's Award (Group) (2021).

Highlighted Service

- DOE Joint Genome Institute Advisory Committee (2025–)
- NIST AISIC Working Groups (Generative AI Risks; GAI Profile Case Studies) (2024-)
- National Academies Working Group on Biosecurity (2024–2025)
- SCHEV EO-30 AI Taskforce Virginia (2024-2025)
- ACM U.S. Technology Policy Committee — AI & Algorithms, Digital Governance Subcommittee (2024-)
- UVA ECE Advisory Board; NSF C-CAS External Advisory Board (2025-)
- CDE Higher-Ed AI Council; STEP Collaborative — Advisory Board (2025-)
- NVTC Impact AI — Steering Committee (2023-2025)

Highlighted Awards & Honors

- IEEE Senior Member (2025)
- Virginia Academy of Science, Engineering, and Medicine (VASEM) Member (2024)
- George Mason University College of Engineering and Computing Faculty Excellence Award
- for Research (2024)
- American Institute for Medical and Biological Engineering (AIMBE) Fellow (2022)
- State Council of Education of Virginia (SCHEV) Outstanding Faculty Award (2022)
- NSF Director's Award for Superior Accomplishment for NSF-wide Molecular Foundations for Biotechnology Program Working Group (2022)
- Editor's Choice, Best Paper, and Best Student Paper Awards (2022, 2019, 2014, 2010)
- NSF Director's Award for Superior Accomplishment for NSF-wide COVID-19 RAPID Group (2021)
- George Mason University Beck Family Presidential Medal for Faculty Excellence in Research
- and Scholarship (2021)
- George Mason University Teaching Excellence Award (2018)
- George Mason University Emerging Researcher/Scholar/Creator Award (2014).
- George Mason University OSCAR Undergraduate Mentor Excellence Award (2013)
- ACM Service Award in recognition of contributions to ACM-BCB (2013)
- NSF CAREER Award (2012)

Education

PhD, Computer Science — Rice University (2008) | MS, Computer Science — Rice University (2005) | BS, Computer Science & Mathematics — Clarkson University (2002, Summa Cum Laude)