

Luke Profio

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Customer-focused **AI/ML Program and Product Manager** with a proven track record of building and scaling innovative technical solutions that deliver measurable impact. With extensive experience in leading the end-to-end product lifecycle, I specialize in leveraging AI/ML, user-centered design, and iterative methods to build high-quality products that align business goals with user needs. At Komatsu North America, I lead the global planning, integration, and optimization of ServiceNow ITSM, ITOM, and SPM platforms – partnering with AI/ML teams to drive innovation and deliver measurable uptime, cost-reduction, and productivity gains to over 10,000 users globally. Key achievements include developing the roadmap and delivery strategy for UW Health’s AI/ML initiative – which automated clinical workflows to reduce costs and clinician burnout while enhancing user experience; leading an AI/ML research initiative for Workday that identified 8 strategic partnerships to reduce costs, mitigate enterprise risk, and enhance the user experience for 70M+ users globally; building and scaling a SaaS eCommerce platform that redefined how creators expand their reach and monetize their artwork through A/B testing, user feedback, and analytics to increase customer retention; co-leading the global development and launch of 2 pharmaceutical products with a \$20M+ budget, boosting client market share and improving ophthalmology patient outcomes; and advancing cardiovascular medicine by developing regenerative medicine products in collaboration with a global research team of 18 associates, co-authoring literature cited by 30+ academic and industry organizations including the American Heart Association. My superpower is translating technical ideas into actionable product requirements, enabling engineering teams to build the right solutions while bring cross-functional teams along the way, so that we all get smarter.

Computational Neuroscience | Biomedical Informatics | Artificial Intelligence | Software Architecture | Strategy

Stanford University School of Engineering, Artificial Intelligence Professional Program

Carnegie Mellon University, MBA in Computational Finance, Technology Strategy, Product Management

UT-Austin, MSc in Artificial Intelligence, Mathematical Science

UC-Boulder, MEng in Computational Data Science, Engineering

UW-Madison, BSc in Biological Science, Genetics

PROFESSIONAL EXPERIENCE:

Global AI/ML Program & Product Manager

Komatsu North America

2025 – Present

Managing the planning, delivery and continuous improvement of our ServiceNow ITSM, ITOM and SPM products, partner with the AI/ML team to define, validate and deploy enterprise solutions, and focus on delivering clear, measurable business outcomes for over 10,000 users globally.

- Lead integrations between ServiceNow ITOM and enterprise platforms (SAP, Palantir), increasing asset discovery coverage by and reducing unplanned downtime.
- Deploy ServiceNow Strategic Portfolio Management (SPM) to streamline project intake and approvals, cutting cycle time and boosting on-time delivery.
- Partner with stakeholders to surface and prioritize high-value AI/ML use cases, unlocking annual savings through predictive maintenance and automation.
- Develop and maintain a core AI/ML infrastructure roadmap, reducing model deployment time and standardizing data-science practices.
- Define and track key metrics—MTTR, self-service adoption, model performance and ROI—to drive continuous improvement and ensure each release delivers impact to the business.

Citizen AI/ML Engineer
Komatsu North America
2025 – Present

- Architect and build end-to-end, cloud-enabled AI/ML pipelines—from data ingestion and feature engineering to model delivery—to scale to enterprise data volumes and meet performance SLAs.
- Automate deployment, versioning, monitoring and retraining of models using CI/CD, container orchestration (Docker / Kubernetes) and MLOps tooling to reduce production downtime.
- Collaborate with AI/ML engineering, DevOps and product teams to translate research prototypes into secure, API-driven services that integrate with business applications and meet stakeholder requirements.
- Enforce data governance, model explainability and audit-ready documentation, tracking key metrics (accuracy, latency, bias) and running A/B tests or hot-fixes.
- Continuously research new algorithms and extend internal AI/ML libraries, running PoCs and knowledge-sharing sessions to keep the organization innovative.

Consulting Computational Neuroscientist, AI/ML Architect
EleutherAI
2024 – Present

- Model neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development.
- Build and maintain end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance.
- Design clinical, imaging, and -omic datasets to support clinical research.
- Collaborate with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.

Consulting Computational Neuroscientist, AI/ML Architect
American College of Artificial Intelligence and Medicine
2024 – Present

- Model neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development.
- Build and maintain end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance.
- Design clinical, imaging, and -omic datasets to support clinical research.
- Collaborate with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.

Consulting Computational Neuroscientist, AI/ML Architect
MLCommons
2024 – Present

- Model neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development.
- Build and maintain end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance.
- Design clinical, imaging, and -omic datasets to support clinical research.
- Collaborate with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.

Consulting Technical Portfolio & Product Director, CODAmarket Co-Founder**CODAworx***2021 – Present*

Built and scaled a SaaS eCommerce platform that connects art buyers and commissioners with creators, redefining how artists expand their reach and monetize their artwork.

- Led the end-to-end design, development, and scaling of the platform with a team of 8+ associates.
- Significantly increased customer retention through targeted outreach and self-service user onboarding and training.
- Optimized transaction efficiency and enhanced user experience by redesigning inventory management systems using A/B testing and user analytics.

Fractional Chief Technology Officer**Insightica.ai LLC***2017 – Present*

- Leading the cross-functional delivery of AI/ML, biomedical informatics, and cybersecurity solutions across Fortune 500 and nonprofit organizations, accelerating innovation and reducing time-to-ROI.
- Translating complex stakeholder needs into product roadmaps and scalable architectures that align with mission-critical business objectives.
- Overseeing multi-team agile delivery cycles, managing scope, cost, and risk while ensuring high client satisfaction and measurable outcomes.
- Driving strategic portfolio planning and governance, enabling data-informed prioritization and resource allocation to boost operational efficiency across product streams.

Angel Investor**Insightica.ai LLC***2021 – Present*

- Scout and back early-stage AI/ML startups by evaluating their tech stacks, data strategies, and founding teams to identify the most promising opportunities.
- Mentor founders on designing and scaling AI/ML solutions, data infrastructure, and go-to-market plans to turn prototypes into market-ready products.
- Tap into my network to arrange pilot projects, customer trials, and strategic partnerships that drive real-world traction.
- Monitor core metrics—business and AI/ML performance—to guide follow-on investments and support sustainable growth.

Chief Executive Officer, Founder**Aurifex Biosciences, Inc.***2022 – Present*

- Founded and led Aurifex Biosciences Inc., a research lab pioneering emerging technologies at the intersection of computational neuroscience, biomedical informatics, and AI/ML architecture.
- Building and scaling a multidisciplinary R&D team focused on solving complex problems in brain modeling, biomedical informatics, and digital health through AI/ML technologies.
- Directing the development of IP-generating platforms that translate neurobiological and biomedical data into intelligent systems with real-world diagnostic, therapeutic, and industrial benefit.
- Driving strategic partnerships with industry and academia, aligning operations with high-impact commercial pathways in neurotechnology, precision medicine, and AI/ML applications.
- Setting and executing a vision for bridging scientific and computational capabilities, building a foundation for next-generation intelligence in health and biological systems.

Startup Founder**Carnegie Mellon University, Swartz Center for Entrepreneurship***2022 – Present*

- Founded and led Aurifex Biosciences Inc., a research lab pioneering emerging technologies at the intersection of computational neuroscience, biomedical informatics, and AI/ML architecture.
- Building and scaling a multidisciplinary R&D team focused on solving complex problems in brain modeling, biomedical informatics, and digital health through AI/ML technologies.
- Directing the development of IP-generating platforms that translate neurobiological and biomedical data into intelligent systems with real-world diagnostic, therapeutic, and industrial benefit.
- Driving strategic partnerships with industry and academia, aligning operations with high-impact commercial pathways in neurotechnology, precision medicine, and AI/ML applications.
- Setting and executing a vision for bridging scientific and computational capabilities, building a foundation for next-generation intelligence in health and biological systems.

Founding Board Member, AI@CMU**Carnegie Mellon University***2022 – Present*

- Co-founded and shaped the strategic direction of AI@CMU, a student- and alumni-led initiative focused on expanding access to AI/ML education, hands-on tooling, and career development.
- Leading workshops, speaker events, and mentorship programs to equip students with practical AI/ML skills using industry-relevant tools and frameworks.
- Building partnerships with faculty, research labs, and tech companies to connect members with resources, projects, and applied learning opportunities in AI/ML.

AI/ML Researcher**University of Texas at Austin***2024 – Present*

- Model neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development.
- Build and maintain end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance.
- Design clinical, imaging, and -omic datasets to support clinical research.
- Collaborate with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.
- Academic Merit Scholar - Model neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development. - Build and maintain end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance. - Design clinical, imaging, and -omic datasets to support clinical research. - Collaborate with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.

AI/ML Researcher, Affiliate**Carnegie Mellon University***2025 – Present*

- Model neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development.
- Build and maintain end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance.
- Design clinical, imaging, and -omic datasets to support clinical research.

- Collaborate with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.
- Academic Merit Scholar - Model neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development. - Build and maintain end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance. - Design clinical, imaging, and -omic datasets to support clinical research. - Collaborate with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.

Graduate Teaching Assistant, AI/ML
University of Texas at Austin

2024 – Present

- Conducting office hours and tutoring sessions with students to ensure their success in AI/ML courses.
- Grading assignments and providing constructive feedback, helping students understand their strengths and areas for improvement.
- Collaborating with faculty to improve course materials, integrating the latest research and instructional methods.
- Mentoring students and fostering an inclusive learning environment, encouraging curiosity, critical thinking, and a passion for AI/ML.

Classical Pianist
Musician

2002 – Present

- Wisconsin Music Teacher's Association - Exemplary Soloist, 1st Place
- National Federation of Music Clubs - Exemplary Soloist, 1st Place
- Milwaukee Music Teacher's Association - 1st Place
- Wisconsin State Music Association - 1st Place

U.S. Technology Policy Committee Member
ACM, Association for Computing Machinery

2002 – Present

- Contribute expert guidance on the societal and ethical implications of emerging technologies to inform national policy and legislative decision-making.

Member, OpenAI Forum
OpenAI

2002 – Present

- Contribute systems-level feedback on model behavior, policy, and deployment strategy to ensure AGI benefits all of humanity.

Eagle Scout
National Eagle Scout Association (DC)

2012 – Present

- Order of the Arrow Honor Society
- My Eagle Scout project involved the cleaning and renovation of Mitchell Park in Brookfield, Wisconsin. As a part of this, I recruited over 20 volunteers and coordinated with local bodies to ensure compliance and follow through.

AI/ML Fellowship

Perplexity

2025

- Participated in Perplexity's AI/ML fellowship, which provided technical and non-technical guidance on the development of AI/ML systems.

Consulting AI/ML Program & Product Manager

Workday

2024 – 2025

- Contributed to Workday's AI/ML product roadmap by identifying scalable solutions that reduce costs, mitigate enterprise risk and enhance the user experience for 70M+ users globally.
- Developed a comprehensive market map of relevant AI/ML solutions, identifying 8 high-yield strategic partnerships aligned with Workday's objectives.
- Led a 6-month research initiative in collaboration with design, engineering, and leadership teams to iteratively develop artifacts, gather feedback, and align on prioritization.
- Presented findings to cross-functional stakeholders, enterprise clients, and customers, incorporating feedback to increase visibility and engagement with Workday's initiatives.

Senior AI/ML Program & Product Manager

UW Health Medical System

2023 – 2025

Built and scaled healthcare IT products (Best Buy Health RPM, Apple Health, Epic Systems, Azure OpenAI, UiPath RPA, Stryker, Vocera, MacOS, GenAI, AI/ML) to reduce clinician burnout, costs, enterprise risk, and improve the quality of healthcare.

- Developed and prioritized an AI/ML product roadmap featuring 50+ high yield use cases for Epic's EHR system through user story mapping, OKRs, market research and stakeholder engagement.
- Managed the creation of a quantitative user feedback pipeline in Databricks and analyzed qualitative survey data, enabling faster iterations and enhanced AI/ML tools.
- Launched 3 GenAI products to automate clinical workflows, effectively reducing clinician burnout and enhancing user experience.
- Conducted user interviews and usability studies to drive iterative design improvements, prompt engineering and resolve pain points, increasing user satisfaction scores.
- Mentored team members on AI/ML tools, product management, and PMO best practices (e.g. ServiceNow SPM), boosting team productivity.

AI/ML Researcher

Carnegie Mellon University

2022 – 2025

- Modeled neural circuits and brain network dynamics to uncover disease mechanisms, guide experimental design, support in commercialization and product development.
- Built and maintained end-to-end AI/ML pipelines for clinical, imaging, and -omics data—ensuring scalability, reproducibility, and regulatory compliance.
- Designed clinical, imaging, and -omic datasets to support clinical research.
- Collaborated with neuroscientists, physicians, architects, and researchers to turn computational findings into validated AI/ML products.

Consulting Computational Neuroscientist, AI/ML Architect
Manifold Research

2023 – 2025

Built and scaled AI/ML products that reduced costs and enhanced the operability of emerging technologies for academic and enterprise organizations.

- Recruited and led a cross-functional global research team, leveraging agile methodologies to develop and launch open-source AI/ML products that cut costs through model optimization and innovative research methods.
- Hosted bi-weekly technical seminars and provided regular updates on open-source initiatives, doubling the core team size.
- Boosted community engagement by 60% in under 6 months through targeted research initiatives and strategic communication efforts.

Consulting Advisory Board Member, AI/ML
UW-Madison

2023 – 2025

- Served on UW-Madison's Applied Data Science advisory board, influencing the development of novel curriculum to align with industry trends (e.g. AI/ML model development).

Consulting Advisory Board Member, AI/ML
UW-Madison

2023 – 2025

- Served on the Chicago House Athletic Club's advisory board, influencing technology initiatives that increased engagement and enabled new digital experiences.

Consulting AI/ML Program & Product Manager
Covalent Metrology

2025

- Built an AI/ML product strategy that integrated stakeholder goals with market feedback, improving cross-team coordination and product development.

Consulting Lead AI/ML Portfolio & Product Manager
JASCI Software

2022 – 2024

- Led full-cycle WMS and WCS implementations for Fortune 500 clients with up to 10X efficiency improvement.
- Delivered 8 major WMS/WCS implementation projects resulting in significant client ROI and operational gains.
- Reduced picking time by 70% through WCS integration, increased warehouse throughput by 300% via automation.
- Supervised industrial engineering team and served as project lead for multi-million-dollar logistics solutions.
- Designed scalable, repeatable WMS implementations to support rapid customer onboarding and growth.
- Spearheaded robotic and automated warehouse system integrations (AMRs, conveyors, WCS layer).
- Conducted in-depth data analysis using complex SQL queries to produce performance and cost benchmarks.

Entrepreneurial Fellowship**Pillar VC**

2023

- Participated in Pillar VC's entrepreneurial fellowship, which provided guidance on growth enablement of startups and securing venture funding.

Associate Technical Project Manager**Labcorp**

2021 – 2022

- Co-led product launches and compliance initiatives for high-budget pharmaceuticals, ensuring regulatory compliance and boosting client market share.
- Co-led cross-functional teams of 35+ associates to launch 2 pharmaceutical products with a \$20M+ budget, boosting client market share.
- Managed a \$200K+ global investigator training initiative, tailoring materials based on client feedback and achieving high satisfaction scores.
- Implemented and optimized compliance tracking processes that reduced audit preparation time and increased global regulatory compliance.

Consulting Program Manager**American Red Cross**

2020 – 2022

- Managed a team of 10+ associates as a part of the American Red Cross' national scheduling division, which recruited blood donors across the globe.
- Implemented and optimized processes that increased efficiency, grew the donor base, and improved the scheduler and donor experience.
- Collaborated with technology teams to support in the implementation of system enhancements, which resolved bugs and improved the user experience.

Consulting Board Member, International Society for Regenerative Medicine**UW-Madison**

2017 – 2022

- Co-founded and provided advisory support on the vision, mission, and goals of the International Society for Regenerative Medicine.
- Led global technology initiatives including webinars and conferences aimed at showcasing novel regenerative medicine research.
- Provided operational support for the organization, helping recruit members, grow support for organizational initiatives, and scale its overall impact.

Technical Project Manager, Researcher**UW-Madison**

2016 – 2021

- Co-led the development of regenerative medicine products aimed at improving the effectiveness and quality of heart disease treatment.
- Co-led a global team of 18 researchers and co-authored a publication cited by 30+ academic and industry organizations including the American Heart Association, advancing cardiovascular medicine, and improving patient outcomes.

- Utilized agile methodologies to enhance the efficiency of cardiac tissue regeneration, paving the way for pre-clinical product development and commercialization.
- Developed data analytics workflows using instrumentation software and programming, reducing processing time while improving data accuracy and quality.

Associate Research Scientist

Merck Group

2019 – 2021

- Developed and optimized pharmaceutical production protocols, applying informatics and analytical chemistry to support the formulation and scale-up of new chemical artifacts.
- Executed high-precision chemical manufacturing procedures in both lab-scale and large-scale environments, ensuring compliance with GMP and internal quality standards.
- Contributed to method development and analytical evaluations across various stages of drug production, driving process improvements and enhanced reproducibility of products.
- Participated in safety audits, cross-functional documentation updates, and knowledge transfer efforts—helping onboard new personnel and standardize best practices in pharmaceutical production.

Board Member, Cardiac on Campus

UW-Madison

2016 – 2020

- Managed and scaled community engagement through new fundraising events, notably a basketball tournament which also raised awareness for cardiovascular disease.
- Collaborated with the board to implement enhancements and optimized processes which streamlined the organization's operations and mission in raising awareness for cardiovascular disease.
- Facilitated various organizational events, including talks on the research and impact of cardiovascular treatment.

Consulting Chief Technology Officer

Gallify

2017 – 2019

- Led the development and deployment of blockchain-integrated AR features using Solidity, Apple ARKit, Object Capture API, and GCP, enabling real-time NFT creation and interactive gallery experiences.
- Oversaw 6 concurrent projects across 4 engineering teams of 10+ associates, driving on-time delivery and aligning product milestones with strategic objectives.
- Served as a Scrum Master and the primary technical decision-maker, accelerating development cycles and streamlining team workflows through structured sprints and async updates.
- Built and scaled internal operations by leading recruitment, creating hiring packages, and implementing financial/resource planning tools, contributing to team growth and operational efficiency.

Assistant Manager

Sendik's Food Market

2014 – 2017

- Led store operations and team coordination across grocery, dairy, and frozen departments, improving stock availability and shelf compliance.
- Implemented inventory control strategies that reduced shrink and spoilage by identifying ordering inefficiencies and optimizing backstock flow.

- Trained and supervised grocery staff, enhancing customer service consistency and reducing labor turnover through team development initiatives (e.g. training courses).
- Collaborated with regional vendors and corporate buyers to execute seasonal promotions and streamline product assortments, driving category sales.

Senior Patrol Leader
Boy Scouts of America

2012 – 2016

- Elected as the highest-ranking youth leader, overseeing the entire troop's operations of 20+ scouts, including planning, delegation, and execution of troop activities and meetings.
- Coordinated and supervised the Patrol Leaders' Council (PLC), setting agendas and facilitating decision-making for troop-wide events, training, and progression.
- Led troop-wide communications, representing youth interests in collaboration with adult leaders to align programming with the BSA's values and goals.
- Developed and coached emerging youth leaders, cultivating a culture of responsibility, initiative, and servant leadership across all patrols.

Patrol Leader
Boy Scouts of America

2010 – 2012

- Led a patrol of 10+ scouts, planning and facilitating weekly meetings, campouts, and advancement activities to ensure engagement and progression of skills.
- Served as the primary liaison between the troop leadership and patrol members, communicating responsibilities and resolving conflicts to promote team building.
- Organized patrol duties during outings, ensuring the execution of meal prep, campsite setup, and safety practices.
- Mentored younger scouts, fostering leadership, accountability, and personal growth through peer instruction and engagement.

Assistant Manager
Grasch Foods Inc.

2012 – 2014

- Led store operations and team coordination across grocery, dairy, and frozen departments, improving stock availability and shelf compliance.
- Implemented inventory control strategies that reduced shrink and spoilage by identifying ordering inefficiencies and optimizing backstock flow.
- Trained and supervised grocery staff, enhancing customer service consistency and reducing labor turnover through team development initiatives (e.g. training courses).
- Collaborated with regional vendors and corporate buyers to execute seasonal promotions and streamline product assortments, driving category sales.

Non-Technical Skills: Portfolio Management, Program Management, Product Management, Project Management, Communication, User Experience (UX), Competitive Analysis, Product Strategy, Market Research, Product Launch, Product Vision, Cross-Functional Team Leadership, Business Analytics, OKRs, KPIs, Go-to-Market

Technical Skills: Python, R, AI/ML, Data Engineering, SQL, APIs, Keras, TensorFlow, PyTorch, NLP, REST Integrations

Tools: Jira, Confluence, Tableau, Databricks, Microsoft Azure, Google Cloud, AWS, Figma, Power BI, Tableau

Volunteering: U.S. Technology Policy Committee Member at the Association for Computing Machinery; Founder of AI@CMU; Eagle Scout; Volunteer at UW Health; Volunteer at the National Alliance on Mental Illness; Member of the OpenAI Forum

Certifications: Certified Information Systems Security Professional (CISSP), Certified Scrum Product Owner (CSPO), Portfolio Management Professional (PfMP), Program Management Professional (PfMP), Project Management Professional (PMP), Agile Certified Practitioner (ACP), Certified Scrum Master (CSM), Carnegie Mellon University Software Engineering Certificate, UW-Madison Regenerative Medicine Certificate

Awards: Carnegie Mellon University David A. Tepper Academic Merit Scholarship, UC-Boulder Academic Merit Scholarship, UT-Austin Academic Merit Scholarship, Albert J. & Adelaide E. Riker Academic Merit Scholarship, Sprint Forward Academic Merit Scholarship, William F. Vilas Academic Merit Scholarship, Qualtrics Academic Merit Scholarship, Distinctive Scholastic Achievement, Dean's List, Wisconsin Music Teacher's Association Exemplary Soloist & 1st Place, National Federation of Music Clubs Exemplary Soloist & 1st Place, Milwaukee Music Teacher's Association 1st Place, Wisconsin State Music Association 1st Place

Organizations: CMU Tech & Entrepreneurship, Carnegie Mellon University Alumni Association, National Eagle Scout Association, Product @ CMU, Project Management Institute, Scrum Alliance, Wisconsin Alumni Association

Test Scores: Wechsler Adult Intelligence Scale (145, 99.9th Percentile), American College Testing (ACT, 34, 99th Percentile), Medical College Admissions Test (MCAT, 515, 91st Percentile)

Languages: English (Native), Italian (Elementary), Latin (Elementary)

Hobbies: Biking, Hiking, Reading, Video Games, Travelling

References and additional information available upon request.