Aya Gare

Curriculum Vitae

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Research Interests

My research interests center on protecting wildlife through law, policy, and governance.

I want to examine how social norms, economic incentives, and other factors shape human attitudes and behavior toward wildlife, and why existing laws and institutions allow harmful practices to persist, particularly when powerful actors can treat penalties as a cost of doing business.

Using behavioral, ecological, and enforcement data alongside quantitative analysis, predictive modeling, causal inference, and decision models, I want to uncover overlooked patterns of harm, expose what perpetuates them, and use those insights to inform targeted reforms that influence behavior and change the underlying conditions that allow wildlife to be harmed.

Academic Qualifications

2020 - 2021 **Northeastern University**, Boston, MA
Graduate Coursework in Computer Science

Selected graduate coursework: Intensive Foundations of Computer Science (Python); Discrete Structures; Object-Oriented Design (Java); Data Structures, Algorithms, and Their Applications within Computer Systems (C).

2010 - 2016 **Florida Atlantic University**, Boca Raton, FL
B.S. in Mechanical Engineering

Tau Beta Pi Engineering Honor Society; Innovation Leadership Honors Program.

Career History

2026 **NextEra Energy**
Data Product Manager

Investigated internal user workflows and enterprise data needs to define data-product opportunities. Translated ambiguous needs into data-product requirements and worked with engineering to define how fragmented operational data can be integrated and made useful for internal decisions.

2025 - 2026 **Tie**
Founding Senior Product Manager

Established the product function as the company's first and only PM, shaping strategy, success metrics, and roadmap for a shopper-identity platform. Used customer research and identity and behavioral signals to define probabilistic and rules-based recommendations for offers, campaign inclusion, and advertising decisions.

2025 **PortaPerch**
Founder & Product Lead

Designed and prototyped a cat-litter system and defined sensor-data requirements for detecting potential health changes. Conducted 40+ interviews and surveys to assess users' needs, demand, and willingness to pay.

2024 - 2025 **StackAdapt**
Technical Product Manager

Led product work for a 0-to-1 email-marketing vertical through beta, coordinating five product and engineering teams and connecting first-party data with advertising and lifecycle messaging. Defined event-triggered messaging, dynamic content, and recommendation capabilities; the product supported 200+ migrations and reached 95% inbox placement. Personalization capabilities were associated with 9.5% higher revenue among adopting brands.

2022 - 2024 **Klaviyo**
Technical Product Manager

Led product initiatives for high-volume campaign scheduling and sending infrastructure supporting 311B+ annual emails. Analyzed delivery-pipeline and webhook logs to identify bottlenecks and prioritize latency and reliability improvements; partnered with engineering on throughput work as systems reached 420M sends/hour and released the Campaign Scheduling API and improved monitoring.

2019 - 2022 **Medtronic**
Software Engineer I & II, Surgical Robotics

Developed Python analytics tooling and Simulink fault-injection automation for the Hugo robotic-assisted surgery platform. Coordinated distributed software and quality-assurance teams as Scrum Master during its first commercial launch.

2018 - 2019 **Medtronic**
Quality Engineer II, Medical Devices

Applied DMAIC, statistical analysis, and root-cause investigation to coronary-catheter manufacturing yield and quality in a regulated medical-device environment.

2017 - 2018 **Newell Brands**
Validation Engineer

Designed and validated test methods across 30-40 concurrent product programs. Used physical testing, CAD/FEA, and Minitab analysis to determine which product-performance claims the evidence supported.

2017 **Pratt & Whitney**, through Belcan
Control Systems Engineer

Developed closed-loop engine simulations in Simulink and test logic for flight-control software verification; authored fault-detection requirements in IBM DOORS.

2016 - 2017 **General Electric**, through Belcan
Structural Analysis Engineer

Modeled turbine-blade fatigue and vibration using ANSYS and Siemens NX; automated CAD validation and evaluated Campbell diagrams and mode shapes.

2016 **Dioxide Materials, Inc.**
Mechanical Engineering Intern, Fuel Cell Technology

Prototyped membrane-electrode-assembly components; converted CAD designs to G-code and fabricated parts using CNC machining.

Research Experience & Applied Analysis

2026 **GLP-1 Applications for Broiler-Breeder Welfare**
Independent case-study exercise based on an Innovate Animal Ag prompt

Completed an economic-modeling case study to assess whether a proposed broiler-breeder welfare intervention merited a commercial trial. Compared delivery methods, estimated costs and uncertainties, and created a weighted trial-funding decision matrix with proposed validation measures.

2015 **SURF Fellow, Collagen Scaffold Bioprinting**
Kang Lab, Florida Atlantic University

Investigated cell-laden hydrogels for bone-tissue regeneration through a competitive Summer Undergraduate Research Fellowship; extracted and characterized collagen scaffolds.

2014 - 2015 **Undergraduate Research, Gelatin Scaffold Bioprinting**
Department of Ocean & Mechanical Engineering, Florida Atlantic University

Designed injection molds and calibrated 3D printing of cross-linked hydrogels for retinal-pigment-epithelium applications. Used materials characterization, including atomic-force microscopy, to assess scaffold structure and mechanics.

2014 - 2015 **R&D Lead, Cardiovascular Systems in Passive Motion**
Department of Ocean & Mechanical Engineering, Florida Atlantic University

Designed and built a low-cost aerobic ergometer intended to improve circulation for people with spinal-cord injuries.

2012 - 2014 **R&D Lead, Catheter Modification for CAUTI Reduction**
Department of Ocean & Mechanical Engineering, Florida Atlantic University

Designed geometric catheter modifications intended to reduce catheter-associated urinary tract infections; developed proof-of-concept prototypes informed by clinician interviews.

Selected Engineering & Field Experience

2015 - 2016 **Senior Design Capstone, MARS-R Hexapod Robot**
Florida Atlantic University / FAU Wave Competition

Built a remote-controlled, 18-servo biomechanical hexapod robot; designed and 3D-printed the component assembly using SolidWorks and Arduino-based control.

2011 **Marine Mammal Necropsy Assistant**
Harbor Branch Oceanographic Institution, Fort Pierce, FL

Assisted in the necropsy of a beached pygmy sperm whale.

Honors & Awards

2015 **Tau Beta Pi Engineering Honor Society**
Florida Epsilon Chapter

2015 **Summer Undergraduate Research Fellowship (SURF)**
Florida Atlantic University

2014 **Andrew Montano Memorial Scholarship**
Florida Atlantic University

2013 **Office of Undergraduate Research & Inquiry Research Grant**
Florida Atlantic University

Research Poster Presentations

2013 **APS 66th Annual Division of Fluid Dynamics Meeting**
Pittsburgh, PA

2013 **ASME International Mechanical Engineering Congress & Exposition**
San Diego, CA

2013 **Florida Undergraduate Research Conference**
University of Florida

2013 **FAU Undergraduate Research Symposium**
Boca Raton, FL

Leadership & Service

2015 - 2016 **Peer Mentor**
FAU Office of Undergraduate Research & Inquiry

2014 - 2015 **Co-Founder & President**
Biomedical Engineering Society, Florida Atlantic University

2012 - 2013 **Treasurer**
American Society of Mechanical Engineers, Florida Atlantic University

Analytical & Research Methods

Systems analysis: Delivery-pipeline and log analysis, telemetry and anomaly monitoring, root-cause analysis

Applied research & evaluation: Technical literature synthesis, economic cost modeling, weighted decision matrices, validation-metric design

Product discovery & delivery: Stakeholder interviews and surveys, requirements specification, prioritization, cross-team dependency analysis

Engineering analysis & validation: Finite-element, modal, and fatigue analysis; fault-injection testing; test-method validation; geometric dimensioning and tolerancing

Fabrication & laboratory methods: CAD/CAM, CNC machining, 3D printing; scaffold and hydrogel characterization; atomic-force microscopy; elastic-modulus testing

Technical Skills

Programming & scripting: Python, SQL, Java, C, JavaScript, TypeScript, MATLAB, Bash, HTML, CSS

Data analysis & visualization: Pandas, NumPy, Matplotlib, Minitab, Excel, Power BI

Databases & integrations: PostgreSQL, REST APIs, SDK integration, webhooks, OpenAI API

Product & behavioral analytics: Amplitude, Mixpanel, Heap, Pendo

Software development & testing: Git, GitHub, Bitbucket, Selenium, Postman, Cursor, GitHub Copilot

Research, design & collaboration: Figma, Miro, Canva, Whimsical, Confluence, Notion

Product & requirements management: Jira, Productboard, Jama, IBM DOORS

Engineering design, simulation & prototyping: SolidWorks, Fusion, Siemens NX, ANSYS, Simulink, Arduino

Operating systems: macOS, Windows; Linux and Unix development environments

Languages

English and Hebrew: Native proficiency in both languages