PAULINA SKURZAK

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EDUCATION

- **College of William and Mary, School of Computing, Data Sciences and Physics | 3.69 Major GPA** May 2026

B.S. Data Science - Artificial Intelligence Concentration, Mathematics Minor

- **Honors:** Dean's List
- **Relevant Courses:** Applied Machine Learning, Data Visualization, Databases, Reinforcement Learning, Generative AI, Calculus II, Multivariable Calculus, Linear Algebra, Statistical Data Analysis

RESEARCH EXPERIENCE

William and Mary - Ignite Global Health Lab & Schroeder Center for Health Policy

Research Fellow, Global Research Institute (GRI) September 2025-Present

- Analyzed multidimensional global health data in Python and R; engineered indicators for predictive and cost-effectiveness modeling
- Evaluated missing-data mechanisms and imputation methods (mean, regression, MICE, KNN, random forest) using RMSE and R^2
- Developed reproducible preprocessing and modeling pipelines

PROFESSIONAL EXPERIENCE

Pantheon Data

Business Development & Data Analytics Intern August-September 2024

- Deployed and refined a GPT-4-based chatbot via Microsoft Azure OpenAI services to generate responses for government and commercial RFPs using a corporate knowledge base.
- Improved proposal generation by refining prompts, uploading past RFPs, exploring Retrieval-Augmented Generation (RAG) architecture, and recommending automation and multi-modal integration.

Magic ToyBox (Startup)

Web Developer Intern July-August 2025

- Collaborated in agile development cycles to improve frontend functionality and UI/UX
- Implemented interface enhancements based on technical feasibility and user behavior

PROJECTS

LLM Robustness & Safety Analysis 2025

- Designed experiments to evaluate LLM refusal consistency under adversarial prompt framing
- Analyzed failure modes and robustness using systematic prompt perturbations

Reinforcement Learning Sepsis Simulation 2025

- Implemented a reinforcement learning simulation modeling treatment policies for sepsis
- Evaluated policy behavior and reward dynamics in a clinical decision-making environment

Dermatology Mobile Application 2022

- Developed a mobile application cataloging dermatological conditions
- Designed a framework for deep-learning–based anomaly detection

Selected Data Systems Project 2025

- Built an interactive Power BI dashboard analyzing trends in a 130k+ record Kindle dataset

SKILLS, LANGUAGES

Programming: Python (NumPy, Pandas, Scikit-learn, Matplotlib, Folium, PyTorch), R, SQL
Machine Learning: Random Forests, Neural Networks, CNNs, Reinforcement Learning, Imputation Methods
Tools: Git, Flask, Microsoft Azure OpenAI
Visualization: Tableau, PowerBI, RShiny
Languages: Fluent Polish; Basic proficiency in French and Russian

ACTIVITIES

Geopolitics of Technology Initiative Forum, Washington D.C. 2025
Innovate Cyber Challenge, Commonwealth Cyber Initiative 2025

- Designed innovative, user-centered cybersecurity solutions through structured research and technical ideation
- Collaborated in cross-functional teams to address applied cybersecurity problems