

# Yile Wang (Arin)

AWS Certified Cloud Practitioner | Latin Honor | VP of BU CDS Student Gov.

ywang887jh@gmail.com | 617-816-0173

## EDUCATION

Johns Hopkins University May 2025

**M.S. in Data Science** | 3.76/4.0

Boston University May 2023

**B.S. in Data Science** | 3.66/4.0

## WORK EXPERIENCE

**Sokat LLC** | *AI Data Engineer* | Rockville, MD

May 2025-Present

*Contracting with Centers for Medicare & Medicaid Services (CMS)*

- Spearheaded the development of a generative AI system for federal leadership, with a focus on response evaluation metrics, structured output analysis, and data-driven iteration cycles
- Designed evaluation workflows improved factual accuracy by **28%**, reduced average response latency by **30%**, and achieved a **92%** compliance rate with internal tone and formatting standards
- Analyzed model performance across **Mistral 7B**, **LLaMA 3**, and **GPT-4o**, using comparative metrics to guide model selection and transition to Amazon Bedrock for scalable inference
- Built interactive **Power BI** dashboards and reports to visualize system performance and role-specific output quality, enabling informed decision-making by CMS leadership
- Collaborated with clients and policy experts to align AI output with real-world evaluation standards and organizational communication frameworks
- Supported iterative product improvements through structured feedback analysis and tracking of model response accuracy across evaluation checkpoints

**DataTechnica LLC** | *AI and Machine Learning Intern* | Bethesda, MD

May-Aug 2024

*Contracting with the National Institute of Health (NIH)*

- Developed and enhanced the core Alzheimer's **RAG system** for NIH's research chatbot using **Pytorch**, and successfully deployed on Google Cloud Platform (**GCP**)
- Improved relevant study retrieval accuracy by **40%** with integration of **OpenAI's text-embedding-3-large** model to vectorize research documents
- Enhanced final search precision to **85%** accuracy through implementing and fine-tuning a cross-encoder model to rerank retrieved results
- Achieved **70%** faster retrieval speed through optimizing Elasticsearch's **k-NN** with **HNSW** indexing, tuning query parameters and designing filter combinations.
- Presented to scientific stakeholders to ensure project aligned with NIH's research objectives

**Johns Hopkins University Shields Uncertainty Research Group (JHU SURgroup)** Jun 2024-Jul 2025

*Research Assistant* | Baltimore, MD

- Developed a scalable **ETL pipeline** to process **7 years of AIS maritime traffic data** (~10M ship records), enabling large-scale analysis of vessel patterns near high-risk U.S. bridges
- Designed modular data workflows for cleaning, geospatial transformation, and feature engineering to support collision risk modeling under **AASHTO specifications**
- Automated ingestion and analysis pipelines to quantify **vessel collision probabilities** and return period for **23 major U.S. bridges**
- Built an interactive **GIS dashboard** visualizing ship traffic and risk scores across **240 Key bridges**, used for stakeholder reporting and policy discussion
- Published data and insights via a public **GitHub repository** and the **Bridge Risk JHU** website

## PUBLICATION

(Abstract Accepted) **Enhancing Steel Column Strength Prediction: A Mechanics-Informed Data Model Integrating Buckling Deformation and Geometric Imperfections** through 2024 Engineering Mechanics Institute Conference and Probabilistic Mechanics & Reliability Conference (EMI/PMC, May 28-31, 2024)

## SKILLS

Python, R, SQL, scikit-learn, PyTorch, TensorFlow, Streamlit, Elasticsearch, GCP, AWS, ETL pipelines