Christian Green

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EDUCATION

Wentworth Institute of Technology, MS in Applied Computer Science, GPA - 3.8 | Boston, MA Syracuse University, BS in Applied Mathematics, Minor in Computer Science | Syracuse, NY

Conferences: International Conference on Artificial Intelligence and Applications (ICAIA), AAAI Conference on Artificial Intelligence (AAAI-25)

SKILLS_

Languages Python, JavaScript, SQL, SAS, Matlab, R, Git, Bash, LaTeX, Haskell, Java

Software Linux, Tensorflow, Pytorch, Blender, OpenCV, Flask, Streamlit, YOLO, Matplotlib, Sklearn, Pandas,

Transformers, Docker, NLP

Research Topics Adversarial Machine Learning, Generative Adversarial Networks, Object Detection, Image Segmentation,

LLM

EXPERIENCE

Wentworth Institute of Technology, Research Assistant | Boston, MA

August 2023 - Present

- Engineered a universal adversarial attack capable of generating a single noise pattern applicable across multiple viewpoints.
- Conducted comparative analysis of universal perturbations against popular adversarial methods, achieving less than 5 percent model accuracy at lower noise levels.
- Applied statistical modeling techniques to analyze attack success rates and compare perturbation robustness across different adversarial methods.
- Authored scientific publications summarizing results, statistical methodologies, and experimental findings.

Blue Cross Blue Shield of Massachusetts, Actuarial Analyst | Boston, MA

August 2020 - July 2022

- Conducted statistical analyses on healthcare cost trends, utilizing multivariable regression models to assess premium changes.
- Designed retention models for quarterly health insurance premiums for BCBSMA members.
- Collaborated with the Department of Insurance (DOI) to evaluate annual rate increases.
- Presented quarterly Administrative Budget Reports to the Chief Actuary and executive leadership.
- Managed Cognos TM1 database, working with engineers to enhance membership data processing.
- Facilitated New England Health Plan (NEHP) administration, ensuring accurate cost distribution across providers.

Blue Cross Blue Shield of Massachusetts, Actuarial Intern | Boston, MA

June 2020 - August 2020

- Conducted medical research to refine condition-based code inclusion criteria.
- Mapped conditions to Episode Treatment Groups (ETG) using SQL-based analysis.
- Developed data reports summarizing statistical findings for healthcare trend analysis.

PROJECTS_

Masters Thesis

Proposed targeted universal perturbation method offering a practical and scalable alternative to computationally
expensive 3D adversarial attacks.

One Noise to Rule Them All | Python, Blender, TensorFlow, Torch

- Designed untargeted universal perturbation by crafting a single noise perturbation applicable to various views of the same object.
- Published work at ICAIA and AAAI-25.

NLP Book RAG System | Python, LangChain, Milvus, Hugging Face, Streamlit, Docker, Ollama

- Developed a scalable NLP-driven search system that enables retrieval augmented generation across vectorized embeddings of Frank Herbert's Dune series.
- Integrated LangChain to generate LLM-powered responses to queries using Ollama (LLaMA 3.2), providing contextually relevant answers instead of simple text retrieval.
- Designed a containerized architecture using Docker and Docker Compose, ensuring efficient deployment and compatibility with cloud environments.
- Leveraged Milvus (Zilliz) vector database to store and retrieve high-dimensional text embeddings, optimizing query performance for real-time interaction.