

SCOTT PITCHER

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SUMMARY

Driven data scientist with 2+ years of experience in both research and deployment, specializing in neuro-symbolic AI and statistical analysis. Skilled in optimizing processes, seeking to expand my skill set through challenging, impactful projects.

SKILLS & LANGUAGES

Tools: PyTorch, TensorFlow, MySQL, Deep Learning, AWS, GCP, Apache Spark, Computer Vision, Kubeflow, Flask, Docker, Kubernetes

Programming Languages: Python, SQL, R, MATLAB, Java, Ruby, HTML, Javascript, CSS, Lua, C++

PROFESSIONAL EXPERIENCE

Moffitt Cancer Center, Tampa, FL

September 2022 – June 2024

Research Machine Learning Scientist

- Led the implementation of advanced statistical techniques, including **Bayesian Inference** and **Propensity Score Matching**, enhancing model performance by **12% in R-squared** to improve data quality and manage confounding variables.
- Increased model efficiency by 31% through **Causal inference** to identify and refine key variables and **active learning** to improve model training and accuracy.
- Researched and developed state-of-the-art supervised deep learning models in **PyTorch** for odds and mortality prediction, achieving a mean accuracy of 94%.
- Engineered Python pipelines (**scikit-learn**, **Spark**) to optimize retrieval of 250GB of data, reducing **API** access time by 36%.
- Collaborated with a cross-disciplinary team to present data insights through reports and visualizations (**seaborn**, **Tableau**), informing strategic decisions for future projects.

EDUCATION

University of South Florida, Tampa, FL

August 2020 – June 2024

Bachelors of Science in Computational Mathematics: *Data Analytics and Business Intelligence Concentration*

- Cumulative GPA: 3.86/4.00 (**Magna Cum Laude**); USF Green & Gold Scholarship (**~\$15,000/year**), Deans List
- **Relevant Coursework:** Advanced Probability, Data Analysis, Machine Learning Development/Deployment, Statistics

PROJECTS

Pokemon Platinum AI - (GitHub)

July 2024 - September 2024

- **Developed and optimized an AI gameplay model** leveraging reinforcement learning with human feedback (RLHF), increasing task completion rate by 35% and improving decision-making efficiency in complex gameplay environments.
- **Implemented action pruning** to streamline the model's decision-making process by limiting the action space, resulting in a 25% reduction in time to reach the target in-game objectives.
- Enhanced the AI's ability to **retain sequential gameplay data** by integrating LSTM-based memory in PyTorch, boosting decision-making accuracy by 31%.
- **Integrated YOLOv9s object detection** for real-time gameplay frame analysis, achieving a 78% reduction in manual annotation time through automated labeling and model fine-tuning.
- **Reduced computational costs by 22%** via model architecture optimization and effective GPU utilization, maintaining high model accuracy while lowering resource usage.

Spotify User Analysis And Recommender System – ([GitHub](#))

July 2024

- Implemented **reinforcement** and **active learning techniques**, elevating predictive accuracy by 20% through user-interaction adaptation, addressing diverse user behavior patterns.
- **Reduced customer churn** by 44% with a scalable playlist recommender in **PyTorch** using **GCNConv** layers, enhancing user retention across varied demographics.

