Logan Bolton

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Education

Auburn University Expected Graduation: May 2026
B.S. in Computer Science, Minor in Statistics *GPA: 3.8*

Technical Skills

Languages: Python, JavaScript, C#, SQL, HTML/CSS
Frameworks/Libraries: PyTorch, Pandas, Scikit-learn, Matplotlib, ASP.NET, NodeJS
Tools: Linux, Git, Docker, AWS, Azure
Certifications: Azure Fundamentals (AZ-900) – Microsoft Certification in Cloud Computing

Experience

Machine Learning Engineer Intern Summer 2025
Corvid Technologies *Huntsville, AL*

- Developed a transformer based model to predict radar cross section (RCS) responses for 3D objects in high fidelity physics simulation software with 27% less prediction error than previous in-house methods.
- Deployed models to company servers with a user friendly graphical interface built with Gradio to allow users to run and view the results of models without any technical knowledge.
- Built a scalable data pipeline using Numpy and PyArrow to process terabytes of raw simulation data to enable the training of physics simulation models.

Undergraduate Researcher June 2024 – Present
Dr. Nguyen's Artificial Intelligence Lab *Auburn, AL*

- First-authored a paper on using prompt engineering to reduce the hallucination rate of LLMs while also improving human interpretability through self-citing model responses.
- Trained linear probe models on open-source multimodal model embeddings (CLIP, SigLIP, LLaVA and Phi3.5) to explain the decisions of black-box models.

Full Stack Web Developer Co-Op August 2022 – August 2024
Campus Web Solutions *Auburn, AL*

- Improved systems serving 100,000+ users, including Auburn's Football Ticketing System and SGA Voting System.
- Modernized legacy ASP.NET Web Forms applications, significantly accelerating feature development.

Projects

Wordle Reinforcement Learning Agent | *LLMs, Reinforcement Learning, PyTorch* | Link 2024

- Finetuned an open-source LLM and trained with reinforcement learning to improve the model from only being able to complete 0.1% of Wordle games to successfully completing 18% of games.
- Discovered and fixed a memory leak bug in ByteDance's open-source reinforcement learning training framework *verl* in order to train a model efficiently.

Spotify Playlist - AI Cover Generator | *Django, AWS, Generative AI* | Link 2024

- Developed an AWS-hosted Django webapp, leveraging Spotify's official API and multiple AI models to automatically create visual representations of users' Spotify playlists.
- Created a program to summarize playlist metadata using the Spotify API and used this information to have an LLM prompt a diffusion image model for a stylistically similar playlist cover.

Twitter Disaster Prediction Model | *BERT, PyTorch* | Link 2024

- Finetuned a BERT model to identify Tweets referencing real world disasters.
- Achieved top 10% performance on a Kaggle competition with 83% accuracy.

Publications

VLMs are Blind: Failing to Translate Detailed Features into Words 2024
Oral Presentation - Asian Conference on Computer Vision 2024

- First-authored a paper in ACCV (5.6% acceptance rate) examining how and why state-of-the-art vision language models like ChatGPT fail on extremely simple visual tasks.
- Cited by over 130+ researchers and featured by OpenAI, ByteDance and TechCruch.