Week 1 Recap

Matthew Perlman

My Background - School

Year: Rising Senior

Major: Computer Science

Classes:

Linear Algebra, Calculus, Data Structures, Algorithms, Probabilistic Models, Search Engines, Grad Machine Learning, Grad Neural Networks in AI & Neuroscience



My Background - Computer Vision



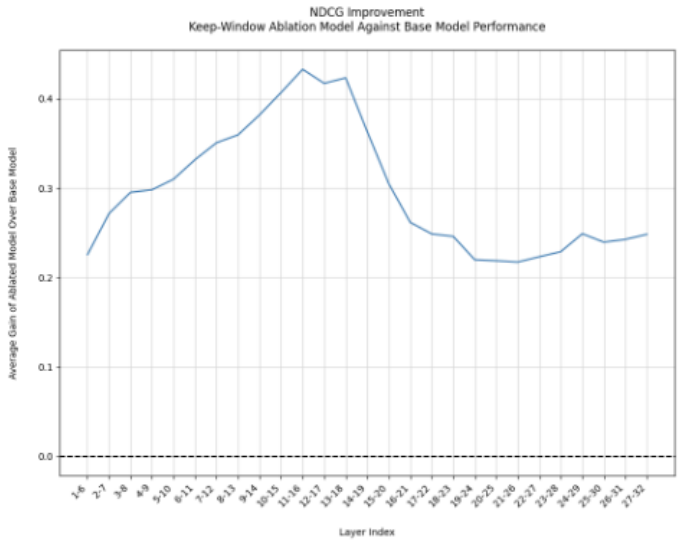


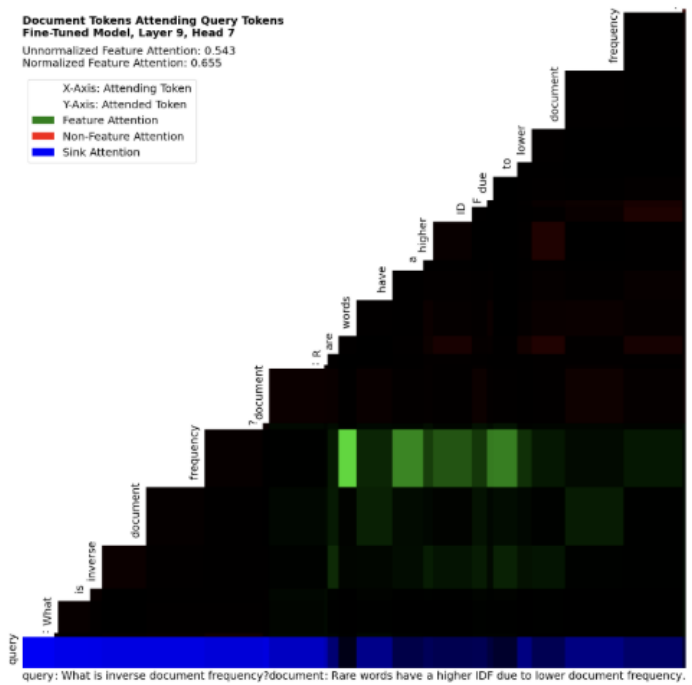




My Background - Research

The Emergence of Relevance Through Axiomatic Attention Patterns During LoRA Fine-Tuning

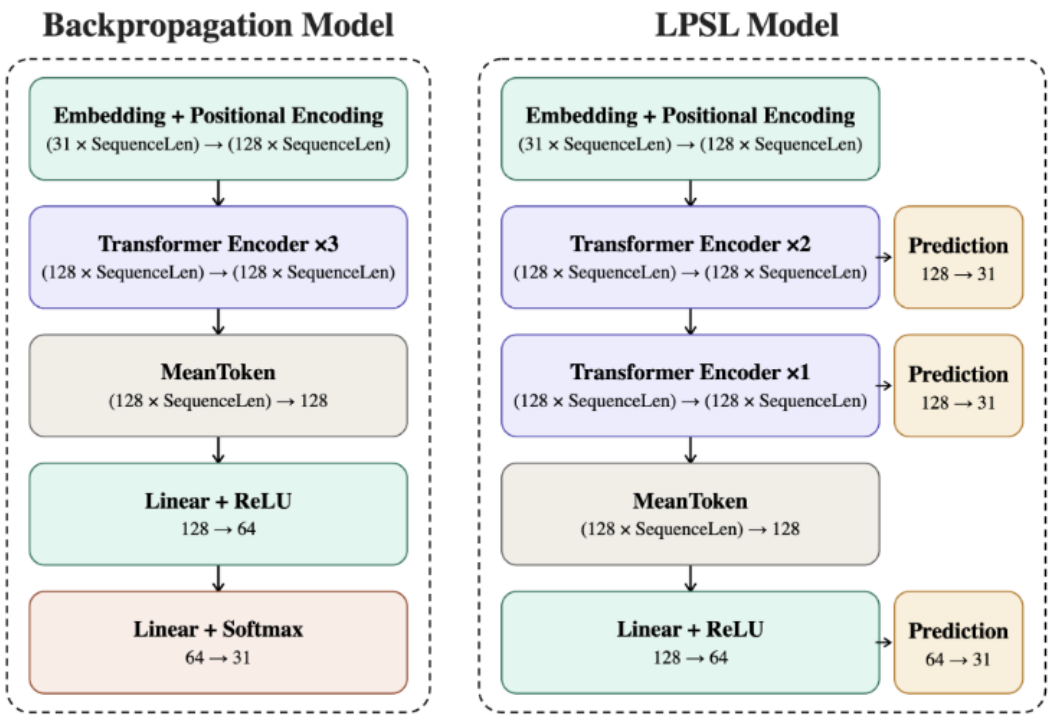






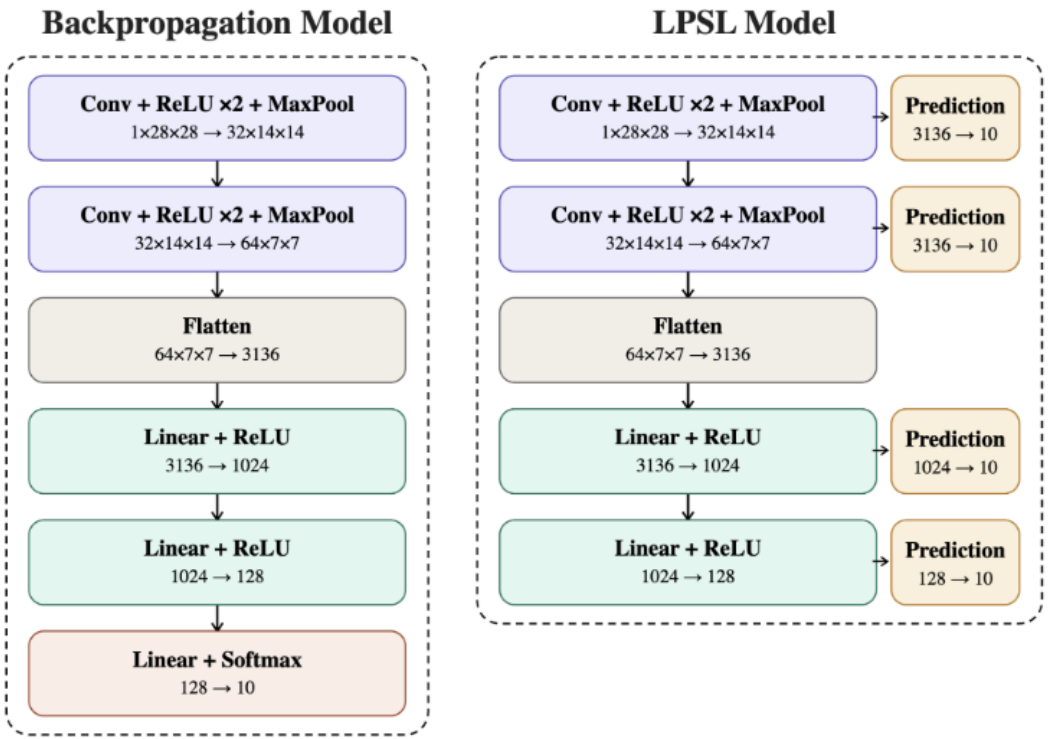
My Background - Research

Local Prediction Segment Learning: Approximate Credit Assignment via Segmented Auxiliary Classifiers

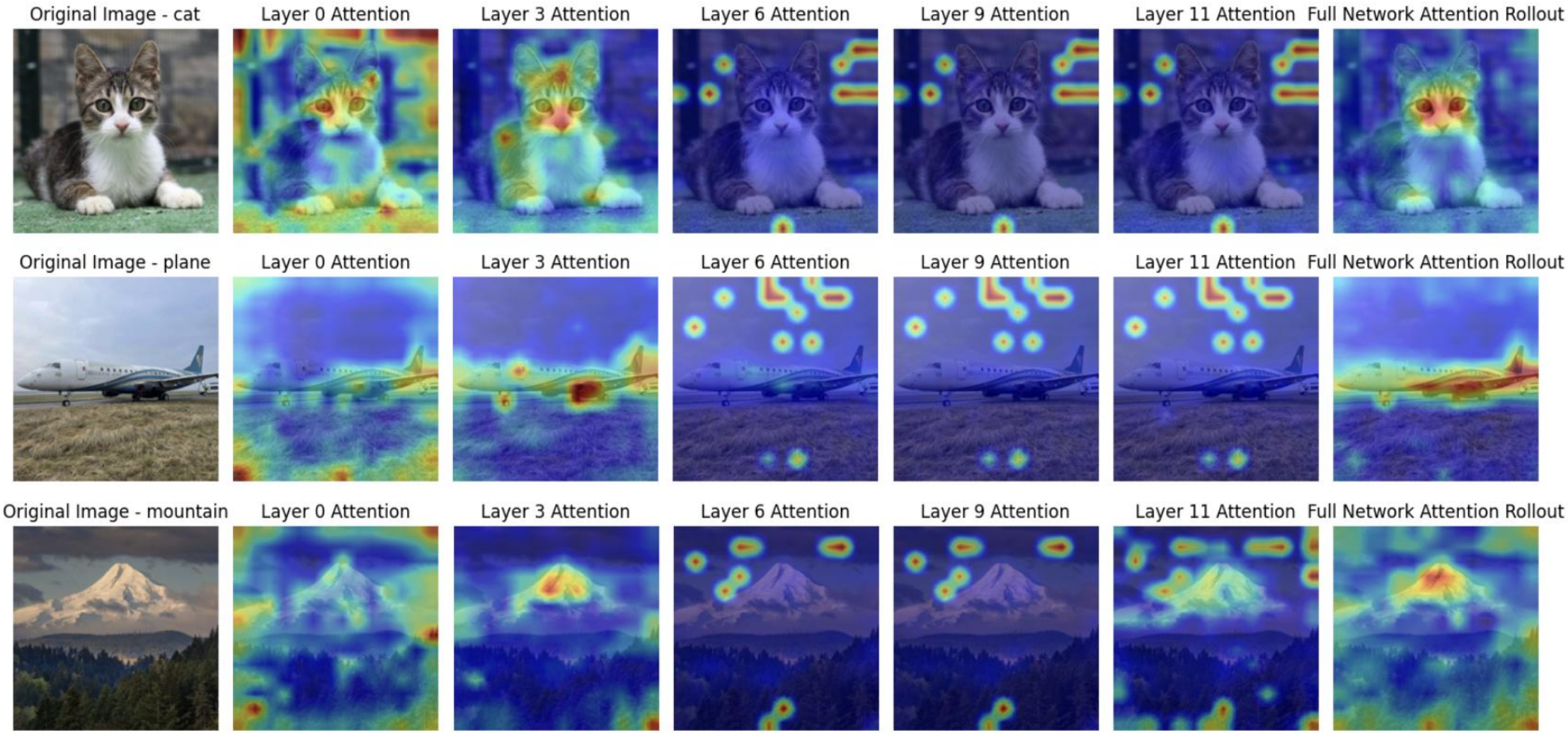


Transformer for Modular Addition

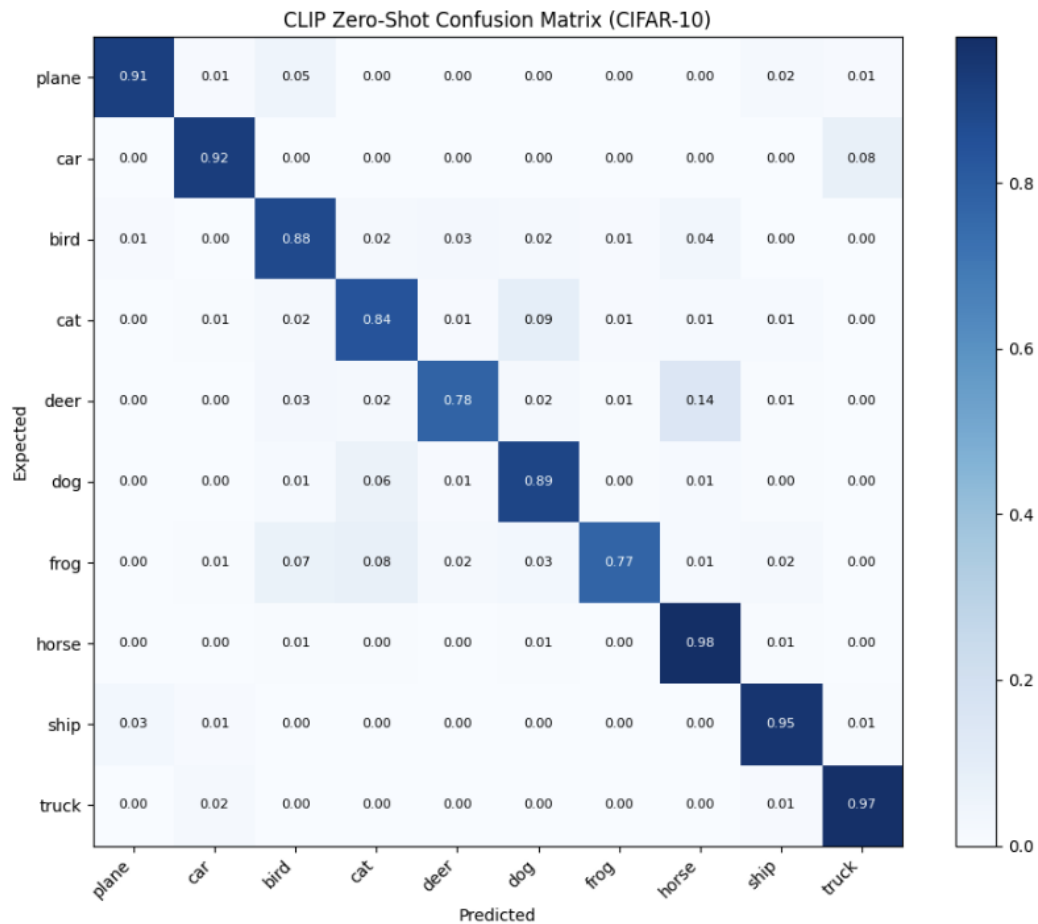
CNN for MNIST Digit



Assignment 1 - ViT Attention Visualization



Assignment 2 (In Progress) - CLIP Classification



Project Proposal: Generating Vector Graphics with VLMs

Initial Task: Use non-fine-tuned SOTA VLM to generate and edit SVGs in a custom harness.

How I might extend this simple problem into a publishable result …

- Interpreting Saliency in the SOTA Model for Harness Fine-Tuning
- Self-Supervised Latent Embedding of SVGs
- Natural Language Editing Inside Latent Embedding Space
- Latent Vector Space Properties for SVG Animations