Divyansh Shukla

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Summary

Machine learning / deep learning practitioner focused on generative models and modern ML systems, with projects spanning flow-matching/diffusion, decoder-only transformers, vision-language model (VLM) experimentation, and robotics/mechatronics prototyping.

Projects

Custom2DRoPEDiT (DiT w/ 2D RoPE)
https://github.com/divyanshuklai/Custom2DRoPEDiT

- Implemented a custom Diffusion Transformer (DiT) variant with 2D (height, width) rotary positional embeddings.
- Experimented in notebooks to validate architecture changes and training behavior.

VLM Project
https://github.com/divyanshuklai/vlm-project

- Built a project pipeline to build, train, and evaluate vision-language models.
- Used Modal as a compute provider to run experiments.

Zero-shot ICE RMA (Teacher–Student RL)
https://github.com/divyanshuklai/zero-shot-ice-rma

- Trained a teacher–student reinforcement learning setup using an RMA-style technique for improved generalization to unseen environments.

Fashion-MNIST Flow Matching
https://github.com/divyanshuklai/Fashion$_M NIST_f low$

- Implemented and experimented with flow matching on Fashion-MNIST.

Decoder-only Transformer (Shakespeare)
https://github.com/divyanshuklai/Shakespeare$_D ecoder_O nly_T ransformer$

- Attempted a decoder-only transformer implementation trained on Shakespeare text (documented as an experimental run).

Skills

- Languages: Python, C++, HTML
- Libraries: PyTorch; Hugging Face Transformers
- ML / DL: diffusion models, flow matching, transformer architectures, reinforcement learning, vision-language model experimentation
- Tools/Workflow: Jupyter notebooks, Modal (remote compute)

Certifications

- Applied Accelerated Artificial Intelligence (NPTEL25CS98)
- Computer Vision (NPTEL25CS93)
- Deep Learning Specialization (Coursera)