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Education Materials Chairs
NeurIPS 2025

Dear Education Materials Chairs,

I am pleased to submit my educational resource, *Next Token Prediction in Decoder-Only Models*, to the NeurIPS 2025 Education Track. This resource is designed for non-expert audiences and aligns with the call's goals of accessible, engaging, and reusable AI education materials.

Audience & Engagement

Target audience: high school students, undergraduate students in non-CS majors, educators, and the general public with no prior AI background.

Expected engagement time: 10 minutes (visual explainer + interactive demo + blog-style explainer).

Overview

The material explains the concept of next-token prediction—the core function of many generative AI systems—using clear, non-technical language. It introduces key terms like tokens, causal masking, and decoder layers before guiding learners through an easy-to-follow step-by-step breakdown of how decoder-only models predict the next token.

An interactive demo allows learners to type a prompt and see the model's top predicted next tokens with their probabilities. The accompanying infographic and blog post reinforce understanding with visuals, examples, and accessible analogies.

Submission Components

- Infographic: `infographic.pdf`
- Blog-Style Document: `explainer.pdf` (5 minutes read time)
- Interactive Demo: Next Token Prediction Demo on Hugging Face

Educational Value & Reusability

This resource is concise, modular, and adaptable for various learning contexts. It includes transparent references, open access to the demo, and clear explanations educators can integrate into lessons, clubs, or outreach programs. The interactive format supports curiosity-driven exploration of a foundational AI concept.

Authorship

This material was prepared with the aim of promoting AI literacy and demystifying core mechanisms

of language models for broad audiences.

Thank you for your consideration. I would be delighted to share this resource with the NeurIPS community and contribute to its mission of accessible and impactful AI education.

Sincerely,

Mahveen Raza