

LARGE LANGUAGE MODEL FUNDAMENTALS CERTIFICATE

Program Description

In today's rapidly evolving digital landscape, large language models (LLMs) are revolutionizing the way we work, write, research, and make decisions. While AI breakthroughs capture headlines, the true potential lies in effectively applying these powerful tools. This certificate program is tailored for professionals eager to harness LLM technologies and implement them immediately.

Throughout this hands-on program, you will acquire practical skills to evaluate, prompt, fine-tune, and deploy LLMs to address real-world challenges. You'll delve into major platforms and tools, including the Hugging Face API, and discover how to select the right model for your needs. Techniques such as preference learning and tokenization strategy will be explored to shape model behavior, alongside foundational concepts like probabilities and attention mechanisms.

Guided by Cornell Professor David Mimno, a leading expert in computational text analysis, this program demystifies LLMs and equips you to integrate them confidently into your workflows. Whether you're in business, education, policy, or research, this program is your roadmap to making AI work for you, starting now.

Key Takeaways

- Set up and utilize large language models for generating accurate text responses
- Apply probability concepts to interpret and compare model predictions
- Customize language models for specific tasks using guided instructions
- Explore the influence of text datasets and tokenization on model output
- Analyze how training data sources and preparation strategies shape model capabilities
- Examine advanced model structures like attention layers and word embeddings to understand language generation

What You'll Earn

- Large Language Model Fundamentals Certificate from Cornell's Ann S. Bowers College of Computing and Information Science
- 80 Professional Development Hours (8.0 CEUs)
- Clock Hours: 84

Who Should Enroll

- Engineers
- Developers
- Analysts
- Data scientists
- AI engineers
- Entrepreneurs
- Data journalists
- Product managers
- Researchers

- Policymakers
- Legal professionals

Total Investment

- 3 months to complete all the courses

How to Enroll

For more information on how to enroll, please visit Large Language Model Fundamentals Certificate (<https://ecornell.cornell.edu/certificates/ai/large-language-model-fundamentals/>).

Program Requirements

Code	Title	Hours
Required Courses		
eCornell CIS621	LLM Tools, Platforms, and Prompts	
eCornell CIS622	Language Models and Next-Word Prediction	
eCornell CIS623	Fine-Tuning LLMs	
eCornell CIS624	Language Models and Language Data	
eCornell CIS625	LLM Architectures and Embeddings	