ARVO EDUCATION COURSE

Saturday, May 3, 2025
8am – 5pm, MST
Salt Palace Convention Center
Salt Lake City, Utah

Artificial Intelligence for ophthalmic research

8am – 5pm

Organizers

Michael F. Chiang, MD, FARVO; Michelle Hribar, MS, PhD; Aaron Lee, MD, MSCI; Jayashree Kalpathy-Cramer, PhD; and SriniVas R. Sadda, MD, FARVO

Session 2: Large language models and how they can be used for research – Hands-on lab

10:30am – 12pm

Target audience

This is an intermediate level session. Attendees should be familiar with the basics of AI and be seeking to use existing tools in their clinics or research.

Description

This session introduces large language models, reviews their strengths and limitations, and provides hands-on instruction for how to use them in your research projects. Participants need to bring their own laptop for the hands-on portion of the session.

Equipment requirements

A Google account, laptop and headphones are required to participate in the hands-on exercises. Related files will be sent via email at least three business days prior to the session.

Learning objectives

Attendees will leave this session with the ability to:

- Describe large language models (LLMs)
- Identify aspects of research projects that could benefit from using LLMs
- Perform analytical tasks using an LLM

Session agenda

Time	Topic	Presenter
10:30 – 10:35am	Welcome and introductions	**Session moderator and presenter** Jayashree Kalpathy-Cramer, PhD Professor Chief, Division of Artificial Medical Intelligence, Ophthalmology Director, Health Informatics, CCTSI University of Colorado Anschutz Medical Campus Aurora, Colorado

10:35 – 10:55am	Introduction to LLMs, how they work and their limitations.	
10:55 – 11am	Hands-on Lab: How LLMs could be used for research	
11am – 11:20am	Exercise 1: Using ChatGPT to extract data from a screenshot	
11:20 – 11:40am	Exercise 2: Simple data analysis like regression, plotting	
11:40 – 11:55am	Exercise 3: Using NotebookLM for audio summarization of a DUA	
11:55am – 12pm	Session wrap-up	