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 1: All the things you wanted to know about AI but were afraid to ask

8-10am

Target audience

This is a beginner-level session. No prior experience with AI, programming, or tools is needed.

Description

This session is for those who want to learn about artificial intelligence (AI) but are not interested in learning how to create it. The session will introduce the basics of AI in plain language. Didactic lectures will explain AI, its fundamental concepts, and related terminology. The last hour of the session will be devoted to an open Q&A with the audience. Come prepared to get the answers you want and need. Already have a question in mind? Want to ask a question anonymously? Send it to the organizers now via our question collection form: https://arvo.wufoo.com/forms/kjcvvy90wg3v3b/

Learning objectives

Attendees will leave this session with the ability to:

- Differentiate between artificial intelligence, large language models and deep learning
- Describe the underlying concepts associated with AI
- Communicate using AI-associated terminology
- List available tools and their associated pros and cons

Session agenda

Time	Topic	Presenter
8 – 8:05am	Welcome and introductions	**Session moderator** SriniVas R. Sadda, MD, FARVO Director of Artificial Intelligence & Imaging Research Doheny Eye Institute Professor of Ophthalmology at the University of California – Los Angeles (UCLA) Geffen School of Medicine Los Angeles, California
8:05 – 8:20am	ABCs of Artificial Intelligence (AI), Machine Learning (ML), and Deep Learning (DL)	Hrvoje Bogunovic, PhD Assistant Professor, Medical University of Vienna

		Director of Christian Doppler Lab for Artificial Intelligence in Retina Vienna, Austria
8:20 – 8:35am	Tools for Machine Learning: Jupyter and Beyond	Michelle Hribar, MS, PhD Assistant Professor of Medical Informatics and Clinical Epidemiology OHSU Portland, Oregon
8:35 – 920am	Panel Discussion ▪ Assessing AI publications – what to look for when assessing a poster or paper. ▪ Key concepts for non-programmers ▪ Common questions and pitfalls for new users ▪ Train/validation/test vs internal validation/external validation ▪ Standard metrics by task	Joining the session presenters for a panel discussion are: Daniela Ferrara, MD, PhD, FASRS Principal Medical Director Genentech Assistant Professor of Ophthalmology Tufts University Boston, Massachusetts Jayashree Kalpathy-Cramer, PhD Professor Chief, Division of Artificial Medical Intelligence, Ophthalmology Director, Health Informatics, CCTSI University of Colorado Anschutz Medical Campus Aurora, Colorado Aaron Y. Lee, MD, MSCI Professor, C. Dan and Irene Hunter Endowed Professor University of Washington Seattle, Washington Daniel SW Ting, MD, PhD Senior Consultant Singapore National Eye Centre Director of Singapore Health Service (SingHealth) AI Office, SNEC Chief Data and Digital Officer Head of AI and Digital Innovation in Singapore Eye Research Institute (SERI) Singapore
9:20 – 9:55am	Open Q&A with the audience	Session moderator
9:55 – 10am	Session wrap-up	