

# The Power, The Perils, & The Potential of AI for ECPs

Lecturer: Dr. Adam Parker, OD

## Description:

This session explores the transformative role of Artificial Intelligence in healthcare and optometry, highlighting both its powerful benefits and disruptive challenges. Attendees will learn how AI is reshaping clinical care, patient communication, advocacy, and practice management—from diagnostic tools and medical scribes to creative uses in branding and education. Participants will leave with practical examples, insights into emerging technologies, and strategies for responsibly integrating AI into their professional work.

## Learning Objectives:

- Understand how Artificial Intelligence is being used in healthcare and optometry today.
- Identify the potential benefits and risks of AI for clinical care, patients, and practices.
- Learn practical ways to integrate AI tools into everyday optometric work.

## Timed Course Outline (1-Hour Lecture)

- 0:00 – 0:05 (5 min): Introduction & Objectives
  - Welcome attendees and outline session goals.
  - Review learning objectives: understanding AI applications, recognizing benefits and risks, and integrating tools into practice.
  - Briefly introduce the relevance of AI in optometry and everyday life.
  - Set expectations for an interactive and practical discussion.
- 0:05 – 0:15 (10 min): History and Fundamentals of Artificial Intelligence
  - Define Artificial Intelligence (AI) and distinguish it from traditional automation.
  - Brief history: early rule-based systems, evolution to modern machine learning and generative AI.
  - Differentiate between reasoning (decision-making) and non-reasoning (pattern recognition) AI.
  - Examples: predictive text, diagnostic image classifiers, and voice assistants.
  - Discuss why AI literacy matters for clinicians.
- 0:15 – 0:25 (10 min): AI in Society — Promise, Hype, and Disruption
  - Examine current real-world uses of AI in business, education, and daily life.
  - Discuss media narratives: utopian vs. dystopian portrayals of AI.
  - Highlight benefits such as efficiency and access to information.
  - Address concerns about misinformation, privacy breaches, and ethical dilemmas.

- Encourage critical thinking on AI's role in patient communication and healthcare trust.
- 0:25 – 0:35 (10 min): Clinical Applications in Optometry
  - Explore examples of AI-driven diagnostic technologies: OCT analysis, fundus image classification, and disease prediction tools.
  - Review how AI scribes and transcription tools streamline documentation.
  - Discuss how AI can assist with clinical decision support and triage.
  - Evaluate limitations—false positives, overreliance, and interpretability issues.
  - Emphasize maintaining clinician oversight and patient-centered judgment.
- 0:35 – 0:45 (10 min): Non-Clinical Uses and Practice Management
  - Demonstrate how optometrists can use AI for practice branding, marketing, and patient engagement.
  - Showcase AI tools for headshots, website text, and visual design.
  - Introduce examples of AI-assisted advocacy messaging and legislative engagement.
  - Highlight workflow automation tools: scheduling, email drafting, and analytics dashboards.
  - Discuss the importance of ethical AI use in public communications.
- 0:45 – 0:55 (10 min): Risks, Regulation, and Ethical Considerations
  - Identify risks: bias in algorithms, data privacy, and patient misinformation.
  - Discuss legal issues such as intellectual property and malpractice implications.
  - Review current FDA and FTC perspectives on AI in healthcare devices and marketing claims.
  - Address potential workforce shifts—what automation may change in healthcare staffing.
  - Provide real examples of AI errors and how to mitigate them through human oversight.
- 0:55 – 1:00 (5 min): Wrap-Up and Discussion
  - Summarize the major themes: opportunity, responsibility, and balance.
  - Reinforce key takeaways: use AI as an aid, not a replacement for human expertise.
  - Open the floor for participant questions, discussion, and sharing real-world use cases.
  - Provide guidance on continuing education resources for AI in healthcare.