Artificial Intelligence in Neurosurgery: A Practical Course

Course Description:

This course will provide neurosurgeons, junior academic faculty, and residents with real world examples and guidance on how artificial intelligence (AI) can be used to make neurosurgical practice better for neurosurgeons and their patients. The course aims to help clinicians understand how to incorporate AI tools into their clinical practice and to critically evaluate models for their transparency, reliability, and efficacy.

Learning Objectives:

Upon completion of this course, participants will be able to:

1. Recognize and potentially utilize Artificial Intelligence models that may help address common neurosurgical clinical questions.
2. Determine how one may create and deploy Artificial Intelligence models in neurosurgical practice.
3. Evaluate what makes a given Artificial Intelligence model reliable and efficacious.
4. Assess various datasets and tools that can lower the barrier to entry for developing and using artificial intelligence.

ACCME Accreditation Statement

The Congress of Neurological Surgeons is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

AMA Credit Designation Statement

The Congress of Neurological Surgeons designates this [activity format] for a maximum of 5.0 *AMA PRA Category 1 Credit(s)*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Reviewers: Akash Patel

Planners: Eric Oermann

Faculty: Daniel Alber, Anton Alyakin, Vivek Buch, Rui Feng, David Kurland, Eric Oermann, Olivier Tak

AGENDA

All times are listed in Central Time

Saturday, May 31, 2025

Time	Topic	Speaker
9:00-9:15 am	Welcome & Introduction	Rui Feng
9:15-10:00 am	How to Practically Access AI Technologies in Your Practice	Eric Oermann
10:00-10:45 am	How Can We Build Foundation Models with Neurosurgical Data	Anton Alyakin
10:45-11:00 am	BREAK	
11:00-11:45 am	Pearls and Pitfalls of Language Models in Healthcare	Daniel Alber
11:45 am-12:30 pm	Bringing Neurosurgical AI Into the Operating Room	Vivek Buch
12:30-12:45 pm	BREAK	
12:45-1:30 pm	How to Go from Zero to One as an AI Developer	David Kurland
1:30-2:15 pm	Transition to Market: Financing AI Startups from Angel Investing to Venture Capital	Olivier Tak
2:15-2:30 pm	Wrap-up	Rui Feng

Agenda and faculty subject to change