2024 Translating Data Science to Neurosurgical Practice: From Computer Screen to Bedside
Saturday, June 8, 2024
Zoom

Course Description
This course will provide neurosurgeons, junior academic faculty, and residents with a framework for answering neurosurgical questions using data science models and translating these models into clinical practice. The course aims to help clinicians understand how to incorporate data science models 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. Identify and describe data science models that can address neurosurgical clinical questions
2. Evaluate the pathway from inception to clinical deployment of a data science model in neurosurgical practice
3. Critically analyze neurosurgical data science models for their transparency, reliability, and efficacy

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 6.50 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Reviewers:
Tiffany Hodges         Akash Patel

Planners:
Natasha Ironside   Eric Oermann   Lauren Stone

Faculty:
Todd Hollon         Shinjini Kundu   Katie Link   Jiachang Liu
Gustavo Rohde      Katharina Schultebraucks   Greg Zynda
AGENDA

All Times are in Central Time

Saturday, June 8

9:00–9:15 am  Welcome and introduction, Natasha Ironside and Lauren Stone
9:15–10:00 am  Writing a Data Science Question for the Neurosurgical Setting, Todd Hollon
10:00–10:45 am  Designing Interpretable Machine Learning Models - Decomposing Black Box Methods, Jiachang Liu
10:45–11:00 am  Break
11:00–11:45 am  Alternatives to Convolutional Neural Networks for Signal and Image Processing, Shinjini Kundu and Gustavo Rohde
11:45–12:30 pm  Curating Big Datasets for Use in Neurosurgical Data Science Search, Katie Link
12:30–12:45 pm  Break
12:45–1:30 pm  Assessing Safety and Efficacy of Data Science Models in the Clinical Environment, Katharina Schultebraucks
1:30–2:15 pm  Transition to Market: Deploying Data Science Models, Greg Zynda
2:15–2:30 pm  Break
2:30–3:45 pm  Data Science Workshop
3:45–4:00 pm  Conclusion, Natasha Ironside and Lauren Stone
RELEVANT CONFLICT OF INTEREST DISCLOSURES

CNS Disclosure Policy
The Congress of Neurological Surgeons controls the content and production of this CME activity and attempts to ensure the presentation of balanced, objective information. In accordance with the Standards for Integrity and Independence in Accredited Continuing Education established by the Accreditation Council for Continuing Medical Education (ACCME), speakers are asked to disclose all relationships they have with ineligible companies* over the previous 24 months which may be related to the content of their lecture. Speakers who have disclosed a relationship with an ineligible company whose products may be relevant to their presentation are listed below.

Any planner, reviewer, or faculty member not on the disclosure list has reported they have nothing to disclose. All relevant financial relationships listed for these individuals have been mitigated.

*Ineligible companies are those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients. An ineligible company is not eligible for ACCME accreditation or participation in Joint Providership.

Agenda and faculty subject to change As of 5/15/2024

Reviewers

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<th>Nature of Relationship(s)</th>
<th>Name(s) of Ineligible Company</th>
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<td>Tiffany Hodges</td>
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<td>Akash Patel</td>
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Faculty

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<td>Todd Hollon</td>
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