

YASH LAHOTI

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EDUCATION

ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
Doctor of Medicine Candidate (MD) - *M4*

New York, NY
May 2026

UNIVERSITY OF PENNSYLVANIA | School of Engineering and Applied Science
Masters of Science in Engineering: Electrical - Artificial Intelligence & Machine Learning
Bachelors of Applied Science: Biomedical Science

Philadelphia, PA
Dec 2021
2017 - 2021

EXPERIENCE

NEW YORK EYE AND EAR RESEARCH FELLOWSHIP < > Dr. Alon Harris
AI Strategist/Clinical Research Scientist

New York, NY
2025 - Present

- Pioneered a large-scale, AI-ready data infrastructure unifying raw imaging files, biomarker measurements, vascular parameters, and longitudinal progression data across multimodal ophthalmic imaging sources for glaucoma studies
- Designed and advanced cutting-edge AI prototypes predicting longitudinal glaucoma risk progression combining funduscopy, OCT, OCTA, and VF perimetry data, enhancing clinical decision-making and early intervention strategies
- Drove high-impact research collaborations and funding initiatives, designing AI-motivated grant proposals for glaucoma research, and forging partnerships with leading AI experts, clinicians, and hospital IT teams to accelerate innovation.

CHIEF TECHNOLOGY OFFICER
SpineSight - Targeted Healthcare Innovation Fellowship

New York, NY
2022 - Present

- Spearheaded the technical development of SpineSight, an AI-driven platform that enhances quantification and diagnosis of spinal cord diseases, automating MRI measurements and reducing patient diagnostic time by 85% (12 months)
- Coordinated a multidisciplinary team of neurosurgeons and neuroradiologists to co-develop 140+ novel clinical metrics, bringing standardization to spinal disease tracking and enabling faster, personalized treatment pathways for patients
- Conducted market research through 150+ interviews with clinicians and patients to refine point-of-access in clinical workflow

LEAD AI SCIENTIST & RESEARCH DIRECTOR
Cho/Kim AI Spine Lab

New York, NY
2022 - 2024

- Directed engineering and experimental design of 15+ active AI initiatives, delegating responsibilities across 25 graduate students and development of 3 software prototypes into clinician workflow at Mount Sinai
- Implemented RAG LLM-Agent System (PydanticAI) with 90% accuracy in assigning appropriate CPT billing codes to over 160K orthopedic operative notes and modify/augment medical documentation for successful insurance approvals.
- Established a proprietary longitudinal database of 1,200+ scoliosis cases, radiographic annotations and clinical outcomes to train AI models and evaluate against 10,000+ active patients across health system

COURSE DIRECTOR AND EDUCATOR
Course Director for Artificial Intelligence in Medicine

New York, NY
2022 - 2024

- Administered and taught the first iteration of AI education for 50+ medical students, developing a curriculum of 8 interactive coding workshops and F500 industry leader speaker-series lectures to educate how AI can augment clinical decision-making

MACHINE LEARNING ENGINEER
TDK SensEI

Pittsburgh, PA
2021 - 2022

- Constructed a TinyML solution for predicting invasive cardiac pressures using non-invasive ECG data, based on over 2000+ hours of patient sensor data, achieving 95% prediction accuracy for central venous pressure in an outpatient monitoring facility
- Supervised interdisciplinary collaboration between cardiologists and engineers, ensuring seamless integration of clinical objectives into the engineering design process; managed project timelines and coordinated efforts to meet development goals

MACHINE LEARNING RESEARCH ENGINEER
Perelman School Of Medicine: Neurosurgery

Philadelphia, PA
2019 - 2021

- Architected a ML pipeline to automate analysis of 4000+ hours of 64-channel electrode recordings of the hippocampus and assist neurologists in classification of epilepsy, achieving 98% ROI identification and 3-fold increase scans processed per hour

AWARDS

- AI Panelist – Invited Faculty: 6th Prostate Cancer Symposium & World Congress of Urologic Oncology ('24)
- 2nd Place Pitch Challenge | *MSIP (Mount Sinai Innovation Partners)* - **\$10K Grant**
- NSF National I-Corps Grant – *SpineSight* selected from 100+ teams | *NSF Entrepreneurial Training Program* - **\$50K Grant**

ADDITIONAL INFORMATION

- Programming: Python, Pytorch, Lanchain, Django, React, R, MATLAB, SQL, C++, SolidWorks, Altium, Arduino
- Developed Technologies: Agentic AI, LLM/RAG, Computer Vision, Embedded Machine Learning, Time Series Classification
- Interests: Central Park Cyclist, Heat/Cold Shock Therapy, Mindfulness/Meditation Practitioner, Masala Chai Enthusiast

PUBLICATION LIST

Manuscripts

- Zaidat, B., **Lahoti, Y.**, Yu, A., Mohamed, K., Cho, S., Kim, J. "Artificially Intelligent Billing in Spine Surgery: An Analysis of a Large Language Model." Sage 2023
- **Lahoti, Y.**, Sai, S., Ahmed, W., Rajjoub, R., Li, M., Zaidat, B., ... & Kim, J. S. (2025). Development of a novel machine learning model to automate vertebral column segmentation utilizing biplanar full-body imaging. The Spine Journal.
- Yu, J., **Lahoti, Y. S.**, McCandless, K. C., Namiri, N. K., Miyasaka, M. S., Ahmed, H., ... & Kim, J. S. (2025). Automated Scoliosis Cobb Angle Classification in Biplanar Radiograph Imaging With Explainable Machine Learning Models. Spine, 50(13), E259-E267.

Podium Presentations

- **Lahoti, Y.**, Yu, J., Cho, S., Kim, J. "Automated Scoliosis Classification from AI-enabled Spine Contouring and Cobb Angle Estimation." EOA 2024 Presentation.
- **Lahoti, Y.**, Yu, J., Cho, S., Kim, J. "Using Dynamic Time Warping to Find Patterns in Coronal Spinal Alignment." EOA 2024 Presentation.

Abstracts & Poster

- **Lahoti, Y.**, Yu, J., Cho, S., Kim, J. "Automated Scoliosis Classification through Classical Machine Learning Methods." EOA 2024 Abstract.
- **Lahoti, Y.**, Yu, J., Cho, S., Kim, J. "Automated Scoliosis Classification from EOS Full Body Imaging through Artificial Intelligence: A Deep Learning Approach with RadImageNet." NASS 2024 Abstract.
- **Lahoti, Y.**, Yu, J., Cho, S., Kim, J. "Using Dynamic Time Warping to Find Patterns in Sagittal Spinal Alignment." COS 2024 Abstract.
- Gold, S. L., Blankemeier, L., **Lahoti, Y.**, Chaudhari, A., Sands, B. E., Boutin, R. "Use of an Automated, Deep Learning Software to Evaluate Body Composition Including Skeletal Muscle Mass and Visceral Adiposity in Patients with Inflammatory Bowel Disease." DDW 2024 Abstract
- **Lahoti, Y.**, Cho, S., Kim, J. "Development of a Deep Learning Algorithm to Automate the Segmentation of Spinal Cord from EOS Radiographic Images." SGIM 2023 Abstract

Pending Manuscripts

- **Lahoti, Y.**, Kurapatti, M., Guttikonda, S., Etigunta, S., Yu, A., Mohamed, K., Ahmed, W., Cho, S. K., Kim, J. S. "Automated Calculation and Estimation of Global Sagittal Alignment from Weight-Bearing X-Ray Imaging Using Deep Learning." Under Review.
- **Lahoti, Y.**, Yu, J., Ahmed, H., Kurapatti, M., Frost, J., Song, J., Corvi, J. J., Namiri, N. K., Cho, S. K., Kim, J. S. "Automated Scoliosis X-Ray Cobb Angle Classification: A Deep Learning Approach with RadImageNet." Under Review.
- Duey, A. H., Hoang, T., **Lahoti, Y.**, Kurapatti, M., Yu, A., Mohamed, K., Hoang, R., Song, J., Isleem, U., Li, S., Kim, J. S., Cho, S. K. "Normal Global Sagittal Alignment Radiographic Parameters in Patients Without Spinal Deformity." Under Review.