# YASH LAHOTI

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## EDUCATION

**ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI** — New York, NY
**Doctor of Medicine Candidate (MD) - *MS3*** — *May 2026*

**UNIVERSITY OF PENNSYLVANIA** / *School of Engineering and Applied Science* — Philadelphia, PA
**Masters of Science in Engineering:** Electrical - Artificial Intelligence & Machine Learning — *Dec 2021*
**Bachelors of Applied Science:** Biomedical Science — *2017 - 2021*

## EXPERIENCE

**CHIEF TECHNOLOGY OFFICER** — New York, NY
*SpineSight - Targeted Healthcare Innovation Fellowship* — *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
- Pioneered market research through 150+ interviews with clinicians and patients to refine point-of-access in clinical workflow

**LEAD AI SCIENTIST & RESEARCH DIRECTOR** — New York, NY
*Cho/Kim AI Spine Lab* — *2022 - Present*
- 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
- Devised a spine-search algorithm to match surgical candidates with historical case records, delivering real-time insights to improve surgical decision-making; actively used by 3 surgeons at Mount Sinai Spine for preoperative planning

**COURSE DIRECTOR AND EDUCATOR** — New York, NY
*Course Director for Artificial Intelligence in Medicine* — *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
- Consulted with Sinai's education faculty board to redesign the medical curriculum, integrating AI/LLM competencies and preparing future physicians to assess strengths of recognize potential ethical risks in AI-driven decision-making

**MACHINE LEARNING ENGINEER** — Pittsburgh, PA
*TDK SensEI* — *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 cardiac 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
- Prototyped and tested a fault detection model to perform electric motor quality control during production; identified anomalies with 98% accuracy and increased faulty product identification by 20%

**MACHINE LEARNING RESEARCH ENGINEER** — Philadelphia, PA
*Perelman School Of Medicine: Neurosurgery* — *2019 - 2021*
- Engineered custom 3D-printed surgical head caps from pig MRI skull reconstruction to secure implanted brain electrodes
- 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 AND SELECT PUBLICATIONS
- 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**
- Automated Scoliosis Classification from EOS Full Body Imaging: A Deep Learning Approach with RadImageNet (NASS '24)
- Artificially Intelligent Billing in Spine Surgery: An Analysis of a Large Language Model (Global Spine '23)

## ADDITIONAL INFORMATION
- Programming: Python, Pytorch, Langchain, 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