Inaugural UT System AI Symposium in Health Care

Unlocking the Future of Artificial Intelligence in Biomedical Research, Health Care, and Education

May 30-31, 2024

Join the conversation
#UTSystemAI

UT Southwestern
Medical Center

Welcome to the Inaugural UT System AI Symposium in Health Care

Artificial intelligence (AI) has the potential to revolutionize biomedical research, health care, and education. However, this excitement is balanced by concerns of over-inflated expectations, errors, and biases. The UT System AI Symposium in Health Care aims to bridge the gap between cutting-edge methodology and current applications. We hope to create a collaborative space that brings together researchers, clinicians, educators, and students to:

Explore current AI activities:

Learn about the latest AI initiatives and breakthroughs in the health care domain.

Forge new collaborations:

Connect with fellow UT System researchers, practitioners, and innovators.

Uncover diverse AI possibilities:

Delve into the multifaceted applications of AI in health care.

Join us for an enlightening event where knowledge converges, ideas flourish, and the future of AI-enhanced health care takes shape.

Thursday, May 30 • Noon-7 p.m.
Tom and Lula Gooch Auditorium (C)

Time	Agenda
1-1:20 p.m.	Introductions: **W. P. Andrew Lee, M.D.** **Executive Vice President for Academic Affairs, Provost, and Dean** UT Southwestern Medical School Welcome Remarks: **John M. Zerwas, M.D., FASA** **Executive Vice Chancellor for Health Affairs** The University of Texas System **Daniel K. Podolsky, M.D.** **President of UT Southwestern Medical Center**
1:20-2 p.m.	Keynote Address: **AI in Health Care** **Nigam Shah, M.B.B.S., Ph.D.** **Chief Data Scientist** Stanford Health Care
2-3 p.m.	Panel Discussion: **AI Across the UT Health System** Moderator: **Eric Peterson, M.D., M.P.H.** **Vice Provost and Senior Associate Dean for Clinical Research** UT Southwestern Panelists: a. **The Honorable Tan Parker** Texas Senate District 12 b. **Claudia Lucchinetti, M.D.** **Dean of Dell Medical School** **Senior Vice President for Medical Affairs** UT Austin c. **Jonathan Efron, M.D.** **Executive Vice President for Health System Affairs** UT Southwestern d. **Jiajie Zhang, Ph.D.** **Dean of the School of Biomedical Informatics** UTHealth Houston e. **Dan Shoenthal** **Chief Innovation Officer and Vice President of Innovation** MD Anderson Cancer Center f. **Nigam Shah, M.B.B.S., Ph.D.** Stanford Health Care

continued on next page

Thursday, May 30 • Noon-7 p.m.
Tom and Lula Gooch Auditorium (C)

Time	Agenda
3-3:15 p.m.	**Break**
3:15-4 p.m.	**Plenary Session 1: Role of AI in Health Care I** Chair: **Yang Xie, Ph.D.** **Associate Dean of Data Sciences** UT Southwestern 1. Presentation: **AI in Medical Imaging** Presenter: **Joseph Maldjian, M.D.** **Professor of Radiology** UT Southwestern 2. Presentation: **AI in Clinical Risk Prediction** Presenter: **Jia Wu, Ph.D.** **Assistant Professor of Imaging Physics** MD Anderson Cancer Center 3. Presentation: **Leveraging AI for Enhanced Clinical Operations** Presenter: **Steve Jiang, Ph.D.** **Vice Chair of Digital Health and AI** UT Southwestern
4-4:15 p.m.	**Break**
4:15-5 p.m	**Plenary Session 2: Role of AI in Health Care II** Chair: **Hongfang Liu, Ph.D.** **Vice President of Learning Health System** UTHealth Houston 1. Presentation: **Privacy Issues in Large Language Models and Mitigation Strategies** Presenter: **Xiaoqian Jiang, Ph.D.** **Associate Vice President of Medical AI** UTHealth Houston 2. Presentation: **Equity by Design: A Blueprint for AI-Driven Health Care Transformation** Presenter: **Andrea Cooley, D.O.** **Assistant Professor of Medical Education** UT Tyler School of Medicine 3. Presentation: **AI Ethics and Regulations** Presenter: **Susan Fenton, Ph.D.** **Vice Dean for Education** UTHealth Houston
5-7 p.m.	**Poster session, happy-hour networking**

Friday, May 31 • 7:30 a.m.-5 p.m.
Tom and Lula Gooch Auditorium (C)

7:30-8 a.m.	**Breakfast**
8-8:05 a.m.	Welcome Remarks: **The Future of UT System Collaborative Research** **Eric Peterson, M.D., M.P.H.** UT Southwestern

continued on next page

Friday, May 31 • 7:30 a.m.-5 p.m.
Tom and Lula Gooch Auditorium (C)

Time	Agenda
8:05-8:45 a.m.	Keynote Address: **The Future of Science and Technology with AI** **Peter Stone, Ph.D.** **Truchard Foundation Chair in Computer Science and University Distinguished Teaching Professor in the Department of Computer Science** UT Austin
8:45-8:50 a.m.	Remarks: **The Honorable Giovanni Capriglione** **Texas House of Representatives District 98**
8:50-9:15 a.m.	Panel Discussion: **AI Technology and Science** Moderator: **Joan Conaway, Ph.D.** **Vice Provost and Dean of Basic Research** UT Southwestern Panelists: a. **Xiaoqian Jiang, Ph.D** **Chair of Department of Data Science and Artificial Intelligence** UTHealth Houston b. **Peter Stone, Ph.D.** **Truchard Foundation Chair in Computer Science and University Distinguished Teaching Professor in the Department of Computer Science** UT Austin c. **Daniel Stromberg, M.D.** **Director of Pediatric Cardiac Critical Care for the Texas Center for Pediatric and Congenital Heart Disease** UT Austin, Dell Medical School
9:15-9:30 a.m.	**Break**
9:30-10:15 a.m.	**Plenary Session 3: AI Methodology and Science** Chair: **Ying Ding, Ph.D.** **Bill & Lewis Suit Professor at School of Information** UT Austin 1. Presentation: **Can We Build a Foundation Model for MRI?** Presenter: **Jon Tamir, Ph.D.** **Assistant Professor of Electrical and Computer Engineering** UT Austin 2. Presentation: **AI for T-Cell Receptor Discovery** Presenter: **Tao Wang, Ph.D.** **Associate Professor of the Quantitative Biomedical Research Center** UTSouthwestern 3. Presentation: **Health Care Foundation Model** Presenter: **Degui Zhi, Ph.D., M.S.** **Chair, Department of Bioinformatics and Systems Medicine** UTHealth Houston
10:15-10:30 a.m.	**Break**

continued on next page

Friday, May 31 • 7:30 a.m.-5 p.m.
Tom and Lula Gooch Auditorium (C)

Time	Agenda
10:30-11:15 a.m.	**Breakout Session I**

1. Presentation: **Leveraging AI to Facilitate Precision Education**

   Chair:
   Andrea Cooley, D.O.
   Assistant Professor of Medical Education
   UT Tyler School of Medicine

   Presenters:

   a. **Diego Niño, M.D., Ph.D.**
      Associate Professor of Cellular Biology & Pharmacology
      Florida International University

   b. **Lin Lipsmeyer, Ed.D.**
      Department Chair and Professor of Teaching & Learning
      Southern Methodist University

   c. **Toufeeq Syed, Ph.D.**
      Associate Professor and Assistant Dean of Education
      UTHealth Houston

2. Presentation: **Early Experiences with AI Embedded in the Electronic Health Record and Clinical Practice**
   Chairs:
   DuWayne Willett, M.D.
   Chief Medical Informatics Officer
   UT Southwestern

   Peter McCaffrey, M.D.
   Director, Division of Bioinformatics and Artificial Intelligence
   The University of Texas Medical Branch

   Presenters:

   a. **Carlos Clark**
      Chief Medical Information Officer
      The University of Texas Medical Branch

   b. **Yee Seng Ng, M.D.**
      Assistant Professor of Radiology
      UT Southwestern

3. Presentation: **AI in Medical Imaging**
   Chairs:
   Guanghua Xiao, Ph.D.
   Professor at the O'Donnell School of Public Health
   UT Southwestern

   Jia Wu, Ph.D.
   Assistant Professor of Imaging Physics
   MD Anderson Cancer Center

   Presenters:

   a. **Junzhou Huang, Ph.D.**
      Professor of Computer Science and Engineering
      UT Arlington

   b. **Baowei Fei, Ph.D.**
      Professor of Bioengineering and Computer Science
      UT Dallas

continued on next page

Friday, May 31 • 7:30 a.m.-5 p.m.
Tom and Lula Gooch Auditorium (C)

Time	Agenda
	c. **Ganesh Sankaranarayanan, Ph.D.** **Associate Professor of Surgery** UT Southwestern
	4. Presentation: **AI in Brain Health** Presenters:
	a. **Igor Zwir, Ph.D.** **Associate Professor of Neuroscience** UTRGV School of Medicine
	b. **David Paydarfar, M.D.** **Chair of Neurology** UT Austin, Dell Medical School
	c. **Gabriel de Erausquin** **Professor of Neurology** UT Health San Antonio
	d. **Alexander Huth, Ph.D.** **Assistant Professor of Neuroscience and Computer Science** UT Austin
	e. **Ramiro Salas, Ph.D.** **Associate Professor of Psychiatry Research** Baylor College of Medicine
11:15-11:30 a.m.	**Break**
11:30-12:15 a.m.	**Breakout Session II**
	1. Presentation: **Innovation, Tech Transfers, and Collaborations with Vendors** Presenters:
	a. **Stephen Ekker, Ph.D.** **Associate Dean of Innovation and Entrepreneurship** UT Austin
	b. **Mark Arnold** **Associate Vice President for Discovery to Impact** UT Austin
	c. **Kal Clark, M.D.** **Clinical Vice Chair of Informatics** UT Health San Antonio
	d. **Isamu Hartman, Ph.D., M.B.A.** **Assistant Director of Technology Commercialization** UT Southwestern
	e. **Bryan Chambers** **Co-Founder and President** Capital Factory
	2. Presentation: **AI in Biomedical Discovery** Chairs: **Milo Lin, Ph.D.** **Assistant Professor, Lyda Hill Department of Bioinformatics** UT Southwestern
	Zhongming Zhao, Ph.D., M.S. **Chair and Director of the Center for Precision Health** UTHealth Houston

continued on next page

Friday, May 31 • 7:30 a.m.-5 p.m.
Tom and Lula Gooch Auditorium (C)

Time	Agenda
11:30-12:15 a.m.	**Breakout Session II** Presenters: a. **Wenjin Jim Zheng, Ph.D.** **Director of the Data Science and Informatics Core for Cancer Research** UTHealth Houston b. **Yidong Chen, Ph.D.** **Professor of Microbiology, Immunology, and Molecular Genetics** UT Health San Antonio 3. Presentation: **Health Care AI Ethical Framework and Regulations** Presenters: a. **Susan Fenton, Ph.D.** **Vice Dean for Education** UTHealth Houston b. **Amar Yousif, M.B.A.** **Vice President and Chief Information Officer** UTHealth Houston c. **Susan McBride, Ph.D., RN-BC** **Associate Dean of Research** UT Tyler 4. Presentation: **Large Language Models and Natural Language Processing** Presenters: a. **Elmer Bernstam, M.D., M.S.E.** **Director of the Biomedical Informatics Group at UTHealth's Center for Clinical and Translational Sciences** UTHealth Houston b. **Xiaoqian Jiang, Ph.D.** **Associate Vice President of Medical AI** UTHealth Houston c. **DuWayne Willett, M.D.** **Chief Medical Informatics Officer** UT Southwestern d. **Degui Zhi, Ph.D., M.S.** **Chair, Department of Bioinformatics and Systems Medicine** UTHealth Houston
12:15-1:15 p.m.	**Lunch**
1:15-2:15 p.m.	1. Presentation: **Industry and Academic Partnership** Moderators: **Russell Poole, M.B.A.** **Vice President for Information Resources and Chief Information Officer** UT Southwestern **Eric Peterson, M.D., M.P.H.** UT Southwestern a. **David C. Rhew, M.D.** **Global Chief Medical Officer & VP of Healthcare** Microsoft

continued on next page

Friday, May 31 • 7:30 a.m.-5 p.m.
Tom and Lula Gooch Auditorium (C)

Time	Agenda
1:15-2:15 p.m.	b. **Christine Tsien Silvers, M.D., Ph.D.** **Healthcare Executive Advisor** Amazon Web Services c. **Alexander "Sasha" Sicular** **Executive Lead of Healthcare and Life Sciences** Google Public Sector d. **Tyler Rorabaugh** **Distinguished Researcher** Palo Alto Networks
2:15-3 p.m.	**Plenary Session 4: One UT Health System AI Collaboration Strategy Panel Discussion** Moderator: **SuRon Green** **Executive Director, The University of Texas Health Intelligence Platform (UT-HIP)** UTHealth Houston Panelists: a. **Edward Sankary, M.D.** **Chief Health Informatics Officer, Regional Physician Network** UT Health San Antonio b. **Peter McCaffrey, M.D.** **Assistant Professor of Pathology, Director of Pathology Informatics and Laboratory Information Systems** University of Texas Medical Branch c. **Eric Martinez, M.S.** **Assistant Director of Business Intelligence and Enterprise Engineering** UTRGV School of Medicine d. **Xiaoquian Jiang, Ph.D.** **Associate Vice President of Medical AI** UTHealth Houston e. **DuWayne Willett, M.D.** **Chief Medical Informatics Officer** UT Southwestern Health System f. **Zain Kazmi** **Officer in Health Affairs** University of Texas System
3-3:20 p.m.	**Break**
3:20-4:45 p.m.	**Abstract Presentations** **Joan Conaway, Ph.D.** **Professor, Vice Provost and Dean of Basic Research** UT Southwestern
4:45-5 p.m.	**Closing Remarks** **Eric Peterson, M.D., M.P.H.** **Professor, Vice Provost and Senior Associate Dean for Clinical Research** UT Southwestern

ACKNOWLEDGMENTS

We would like to acknowledge the contributions of the UT System AI Symposium in Health Care

Organizing Committee:

Caroline Chung, M.D., M.Sc., FRCPC, CIP
MD Anderson Cancer Center

Kal Clark, M.D.
UT Health San Antonio

Andrea Cooley, D.O., FACOS
UT Tyler School of Medicine

Ying Ding, Ph.D.
UT Austin, Dell Medical School, co-Chair

Stephen Ekker, Ph.D.
UT Austin, Dell Medical School

David Jaffray, Ph.D., B.Sc.
MD Anderson Cancer Center

Hongfang Liu, Ph.D.
UTHealth Houston, co-Chair

Eric Martinez, M.S.
UTRGV School of Medicine

Peter McCarey, M.D.
UTMB Health

Edward Sankary, M.D.
UT Health San Antonio

Yang Xie, Ph.D.
UT Southwestern, co-Chair

Igor Zwir, Ph.D.
UTRGV School of Medicine

Travel awards to the Inaugural UT System AI Symposium in Health Care were made possible through the generous support of our sponsors:

Palo Alto Networks

Amazon Web Services

Table of Contents

Oral Presentations

Geracci, James – AI-Enabled Clinical Documentation in Ambulatory Primary Care: A Prescription for What Is Ailing the Healthcare Experience? 5
Sankaranarayanan, Ganesh – Automated Task Segmentation of Robotic Gastrojejunostomy Videos Using Advanced Deep Learning 6
Wang, Song – Detecting Inconsistent Suicide Cause Annotations Using Large-Language Models 7
Makhija, Disha – Equitable AI: Ensuring Fair Predictions in Distributed Healthcare Systems 9
Fu, Sunyang – FunctionalAI4EHR: A Language Model-Empowered AI Framework for Functional Status and Fall Occurrence Ascertainment on Electronic Health Records 10
Zhou, Qin – Graphic Convolutional Network That Integrating Histology Information with Spatial Transcriptomics to Uncovering the Spatial Cell-Level Gene Expression 11
Muneer, Amgad – PD-L1 Expression Prediction Using Multi Scale Ensemble Transformer (SCENT) 13
Segar, Matthew – Race-Agnostic Machine Learning-Based Models Improve Incident Atrial Fibrillation Prediction 14
Deng, Beichuan – Self-Supervised Hybrid Neural Network to Achieve Quantitative Bioluminescence Tomography for Cancer Research 16
Han, Yi – T-Cell Reactivity Biomarkers Empowered by a T-Cell Receptor-Antigen Foundation Model 18

Poster Presentations

Garduno-Rapp, Estefanie – #2491 - Early Identification of Patients at Risk for Iron-Deficiency Anemia Using Deep-Learning Techniques 19
Qian, Xiaoxue – #2510 - WaVNet-Refine: A Joint Framework of an Adaptive WaVNet Model and a Refine Model for Test-Time Adaptation in Medical Image Segmentation 20
Zhao, Hengrui – #2515 - Medical Image Segmentation Assisted with Clinical Inputs via Language Encoder in a Deep Learning Framework 21
Li, Yang – #2521 - Motion-Resolved Magnetic Resonance Fingerprinting Using Low-Rank Spatiotemporal Implicit Neural Representation (LR-STINR) 22
Jing, Bowen – #2522 - Deep Convolutional LSTM Model for Prediction of Pathological Complete Response to Neoadjuvant Chemotherapy for Breast Cancer Using Multi-Time Point DCE MRI and Clinical Data with Uncertainty Quantification 23
Zhu, James – #2525 - Mapping Cellular Interactions from Spatially Resolved Transcriptomics Data 24
Song, Bing – #2527 - Cmai: Predicting Antigen-Antibody Interactions from Massive Sequencing Data 25
Shao, Hua-Chieh – #2529 - Real-Time CBCT Imaging via a Single Arbitrarily-Angled X-Ray Projection Using a Joint Dynamic Reconstruction and Motion Estimation (DREME) Framework 26
Little, Samantha – #2530 - A Comparative Analysis of AI-Generated Practice Questions for USMLE Step 1 Preparation 27
Wang, Qingying – #2535 - Off-the-Shelf Segmentation Networks as a Tool for Dose Level Prediction 28
Kazemimoghadam, Mahdieh – #2536 - AI-Driven Adaptive Radiotherapy Target Segmentation: A Follow- the-Leader Approach 29
Wang, Tianyu – #2537 - Deep-Learning Based Spectral Noise Reduction with Synthetic Data for 7T Proton MRSI 30
Zhang, Yingzi – #2538 - Natural Language Processing to Extract Acute Symptom Clusters from Triage Phone Notes with Cancer Patients 32
Tang, Chen – #2541 - 3D Reconstruction of Spatial Transcriptomics with Spatial Pattern Enhanced Graph Convolutional Neural Network 33
Cooper, Lauren – #2545 - Harnessing Machine Learning for the Selection of Empiric Antibiotics in Urinary Tract Infections 35
Rodriguez-Fernandez, Jorge – #2547 - AI InBasket Deep Dive: Who's Busy and Who's Breezy? 36

continued on next page

Xiao, Xue – #2549 - Deep-Learning Analysis Uncovers Enhancer-Altering Mutations to Drive Genome-Wide Changes of TF Binding for Tumorigenesis 38
Ede, Nneka – #2552 - Development of a Deep Learning 1 Model for Differentiating Vitiligo from Other Pigmentation Disorders 39
Archer, Holden – #2554 - Fast and Reliable Assessment of Hip Dysplasia with Artificial Intelligence-Generated Measurements 40
Ghasemi, Mahan – #2555 - Enhancing Radiology Workflow via AI-Driven Prediction of Suboptimal Radiographs 41
Maciel, Corbin – #2559 - Untrained Neural Network for Super-Resolving Non-Contrast-Enhanced 3D Whole-Heart MRI Using REACT 42
Holcomb, Michael – #2576 - Zero-Shot Multi-Modal Questions Answering for Assessment of Medical Student OSCE Physical Exams 43
Ruan, Xiaoyang – #2577 - Revolutionizing Postoperative Ileus Monitoring: Exploring GRU-D's Real-Time Capabilities and Cross-Hospital Transferability 45
Yan, Shunyu – #2581 - Real-Time Secondary Dose Verification for Online Adaptive Radiotherapy (ART) via Geometry-Encoded U-Net 46
Nguyen, Lily – #2583 - Artificial Intelligence Chatbots as Sources for Patient Education Material on Child Abuse 47
Huang, Ming – #2584 - A Language Model Fusion Approach for Identifying Patient Primary Concerns in Patient Portal Messages 48
Pruitt, John – #2585 - Accuracy of GPT-4 in Differential Diagnosis Generation of Brain MRI Lesions 50
Lu, Qiuhao – #2587 - Integration of External Knowledge into Pre-Trained Language Models Capturing Physician Reasoning from Electronic Health Records 52
Subramanian, Vinayak – #2590 - Diagnostic and Prognostic Evaluation of an Echocardiography-Based Artificial Intelligence Algorithm for Detecting HFpEF: A Case-Control Analysis 53
Patel, Mahi – #2592 - Understanding the Implications of Systemic Biases in Generative Artificial Intelligence in Multiple Sclerosis 55
Li, Yunxiang – #2593 - Zero-Shot Cone-Beam Computed Tomography (CBCT) to CT Conversion Using a Denoising Diffusion Wavelet Model (DDWM) 56
Martin, Blake – #2595 - Orthopedic AI 57
Han, Xinyue – #2596 - Brain Cell Type Atlas Prediction by High-Resolution Diffusion MRI 58
Popokh, Benjamin – #2597 - Rates of AI 'Hallucination' in Case-Based Learning Tasks Assigned to Medical Students 60
Wen, Zhuoyu – #2598 - Deep Learning-Based H-Score Quantification of Immunohistochemistry-Stained Images 61
Lederer, Eleanor – #2600 - Automatic Identification of the Principle Compressive and Tensile Groups in the Human Femoral Head Using Artificial Intelligence-Based Segmentation 62
Nguyen, Huu Phong – #2601 - Automated Video-Based Analysis for Advanced Laparoscopic Suturing Using Deep Learning: The ATLAS Approach 63
Schultze, Mark – #2602 - Enhancing Operations and Healthcare Through Integrated AI: A Comprehensive Overview of UTMB's Advanced Infrastructure 64
Chen, Jie – #2603 - Assess Disease Progressive via Mixed Probability Density Function and Multilayer Perceptron 65
Zhou, Qin – #2607 - Deep Learning of Cell Spatial Organizations Identifies Clinically Relevant Insights in Tissue Images 67
Zhang, Haozhao – #2608 - Potential Role of Multiomics in Predicting Treatment Outcomes for Brain Metastases with Personalized Ultra-Fractionated Stereotactic Adaptive Radiotherapy (PULSAR) 68
Huang, Jingwei – #2611 - A Critical Assessment of Using ChatGPT for Extracting Structured Data from Clinical Notes 70
Liu, Yang – #2612 - Characterizing Tumor Heterogeneity Integrating Cell Differentiation Status and Spatial Evolution Trajectory of Lung Cancer 71
J**amieson, Andrew** – #2616 - Rubrics to Prompts: Deploying Zero-Shot Large Language Models for Automatic, Expert-Level Grading of Medical Student Encounter Notes 73

continued on next page

De Aguiar Kuriki, Paulo Eduardo – #2617 - RadPointGPT: A Chatbot Enhanced by Retrieval Augmented Generation and a Large Language Model for Improved Access to Internal Documents 74
Gu, Zifan – #2619 - Identifying Social Determinants of Health in Medical Notes: A Large Language Model Approach 75
Gu, Zifan – #2620 - A Deep Learning Model for Clinical Outcome Prediction Using Longitudinal Inpatient Electronic Health Records 77
Hershman, Steven – #2621 - Towards a Personalized Nutrition Assistant for Dietitians and Patients 78
Schmitz, Erich – #2623 - Distant Metastasis Prediction of Head and Neck Cancers Using Graph Neural Networks 79
Makhija, Disha – #2625 - Efficient Individual Treatments Effect Estimation Using Causal Transformers in Federated Learning Settings 80
Beattie, Jacob – #2626 - Utilizing Large Language Models (LLMs) to Enhance Clinical Trial Matching 81
Wanyan, Tingyi – #2628 - Mechanism Interpretable Drug-Gene Interaction (MIDI) Transformer for Cancer Drug Effect Prediction 82
Nezafati, Kuroush – #2630 - Assessing Disease Severity in Cutaneous Lupus Patients Using Natural Language Processing 83
Maniscalco, Austen – #2631 - Encoding Patient-Specific Dosimetric Goals as Three-Dimensional Inputs for Tailored Radiotherapy Dose Prediction 84
Scanio, Angelo – #2632 - Opportunistic Screening for Osteoporosis Using Artificial Intelligence in Chest CT Scans: Validation Against DEXA Scans 85
Gottlieb, Assaf – #2633 - Tissue-Specific Atlas of Trans-Models for Gene Regulation Elucidates Complex Regulation Patterns 86
Samade, Richard – #2637 - Making Your Points in Under a Minute: Utilization of Natural Language Processing to Produce Concise Bilingual Summaries of Common Orthopaedic Conditions 87
Bhai, Salman – #2640 - Identification and Stratification of Myositis Subtypes Using Machine Learning 88
Hao, Xubing – #2641 - Exploring Pre-Trained Language Models for Vocabulary Alignment in the UMLS 89
Xie, Jiacheng – #2642 - Prior Frequency-Guided Diffusion Model for Limited-Angle (LA) CBCT Reconstruction (PFGDM) 90
Gopal, Kaustubh – #2643 - AI Prognostics in Trauma: Predicting Outcomes via an Automated, Real-Time Machine Learning Algorithm 91
Khan, Safia – #2645 - AI-Assisted Patient Query Resolution for Enhanced Healthcare Efficiency and Personalized Care 92
Succar, Bahaa – #2646 - Improving the Readability of Patient Education Materials on Traumatic Injuries Using ChatGPT 93
Hutnyan, Matthew – #2647 - Ethical Considerations for the Use of Artificial Intelligence in Mental Health Care 95
Pandey, Devansh – #2648 - Harnessing the AI Revolution: Application of Large Language Models (LLMs) for Genotype Imputation 96
Lim, Terence – #2650 - LLM-Powered Summarization and Analysis of Patient Transcripts 97
Kota, Srinivas – #2651 - Machine Learning for Early Prediction of Electrographic Seizures in Newborns 99
Wang, Hui-Ju – #2653 - Site-Agnostic Deep Learning-Based 3D Dose Prediction for Brain, Head and Neck, and Prostate Cancer Patients 100
Choi, Jae – #2654 - ChatGPT and Large Language Models (LLMs) Awareness and Use: A Prospective Cross-Sectional Survey of Medical Students 101
Kang, Shinyoung – #2656 - Find Physical Exam Period in OSCEs 102
Shakur, Ameer Hamza – #2657 - RAG vs. Zero-Shot? Leveraging LLMs for Transcript-Based Automated Grading of Medical Student Exams 103
Truong, Nghi – #2658 - Synthesizing High-Resolution IDH-Specific Brain Tumor MRIs Using Latent Diffusion Models 104
Chen, Xinru – #2659 - Prediction of High-Sensitivity Cardiac Troponin T (hs-cTnT) Elevation Using Cardiac Substructure Dose in Lung Cancer Radiotherapy 106

continued on next page

Garces Palacios, Sofia – #2661 - Developing Artificial Intelligence Models for Medical Student Suturing and Knot-Tying Video-Based Assessment and Coaching 107
Li, Rui – #2662 - MLGAN: A Meta-Learning Based Generative Adversarial Network Adapter for Rare Disease Differentiation Task 108
Khairnar, Shekharmadhav – #2666 - One Working Model Is All you Need to Implement Surgical Tool Segmentation and Tracking on Any Procedural Video Using Segment Anything Model (SAM) 110
Hein, David – #2669 - Model Distillation for Extraction of Clinical Entities from Pathology Reports 111
Lozano, Monica – #2672 - The Influence of Deep Brain Stimulation on Prefrontal Cortex Activity in Parkinson's Disease and Essential Tremor: Insights from an fNIRS Investigation 112
Polat, Dogan – #2674 - Enhancing Radiological Efficiency and Accuracy: The Development and Implementation of an NLP-Driven Protocoling Algorithm 113
Vedovato, Sol – #2676 - Chain-of-Thought Artificial Intelligence Agent for Visual Overlay Decision Making in COSCE Videos of Facial Exams 115
Salinas, Daniel – #2677 - Using Robotics-Aided Upper Limb Evaluation to Predict Early-Stage Parkinson's Disease in Clinical Practice: A Machine Learning Case Study 116
Bangalore Yogananda, Chandan Ganesh – #2679 - Enhancing Clinical Decision-Making: MRI-Based Deep Learning for Confidence-Informed IDH Prediction in Gliomas 117
Yaros, Katarina – #2681 - Diagnostic and Prognostic Evaluation of an Echocardiography-Based Artificial Intelligence Algorithm for Detecting HFpEF 118
Wiessman, Maya – #2683 - Optimizing AI Thresholds for the Detection of Actionable Coronary Artery Calcium in Chest CT Imaging: A Validation Study Against Human Scoring 119
Bilal, Fnu – #2684 - Automated Cell Quantification and Intensity-Based Analysis Reveal Glioblastoma Multiforme Cell Heterogeneity in High-Throughput Microwell Devices 120
Andre, Kyra – #2685 - Improving Referrals in Pediatric Subspecialties: Exploring the Use of Standardized Electronic Referrals and Artificial Intelligence 121
Wang, Ruheng – #2686 - Multi-Level Contrastive Learning for Protein-Ligand Binding Residue Prediction 122
Pokala, Rao – #2687 - Binary Classification of Chest X-Rays: An Analysis of Accuracies Using Several Deep Learning Methods with Varying Sample Sizes and Compositions 123
Zhou, Jiawei – #2691 - Synthetic Lies: Characterizing AI-Generated Misinformation and Evaluating Algorithmic and Human Solutions 124
Chang, Seheon – #2692 - Evaluating Medagent Consistency in Medical Diagnosis Through Iterative Testing 125
Showkatian, Eman – #2694 - ISABR-SELECT: A Clinical-Radiomics Model for Personalized Immunotherapy in Early-Stage NSCLC 126
Saad, Maliazurina – #2695 – Deep Learning Signature from Pretreatment Chest CT Associated with Immunotherapy Benefit in EGFR/ALK-Negative NSCLC 127
Aminu, Muhammad – #2696 - CoCo-ST: Comparing and Contrasting Spatial Transcriptomics Data Sets Using Graph Contrastive Learning 129
Salehjahromi, Morteza – #2699 - Synthetic PET from CT Improves Diagnosis and Prognosis for Lung Cancer 130