



# **AIHealth 2025**

The Second International Conference on AI-Health

March 9<sup>th</sup> –13<sup>th</sup>, 2025

Lisbon, Portugal

**AIHealth 2025 Editors**

Les Sztandera, Thomas Jefferson University, USA

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571

**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2025) by International Academy, Research, and Industry Association (IARIA)  
Please refer to the Copyright Information page.

Printed with permission by Curran Associates, Inc. (2025)

International Academy, Research, and Industry Association (IARIA)  
412 Derby Way  
Wilmington, DE 19810

Phone: (408) 893-6407  
Fax: (408) 527-6351

[petre@iaria.org](mailto:petre@iaria.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## Table of Contents

Revolutionizing Prostate Cancer Diagnosis: An Integrated Approach for Gleason Grade Classification and Explainability <i>Anil Gavade, Rajendra Nerli, Shridhar Ghagane, and Les Sztandera</i>	1
Heavy Metals in Human Health and Pregnancy: How Data Analysis, Mining, and Modeling Present a Solution <i>Emma Frennborn, Khalil Rust, and Les Sztandera</i>	7
Recent Advances in Machine Learning for Log File-Based PSQA for IMRT and VMAT <i>Kellin De Jesus, Leon Dunn, David Thomas, and Les Sztandera</i>	12
Data Mining Techniques in Online Health Communities <i>Cassandra Mikkelsen and Cali Sweitzer</i>	19
Detecting Suicide Risk and Exploring Contributing Factors: Classification and Topic Modeling of Social Media Data <i>Evan Dan, Jianfeng Zhu, and Ruoming Jin</i>	23
BARRIER: Beta-Secretase 1 Reduction for Amyloid Plaque Regulation through Inhibition Exploration and Research <i>Neel Banga</i>	29
A Hybrid Machine Learning Approach for Enhanced Skin Cancer Diagnosis Using Convolutional Neural Networks, Support Vector Machines, and Gradient Boosting <i>Fazila Patel, Adedayo Olowolayemo, and Amina Souag</i>	35
Comparative Case Study on Implementing Generative AI in Medical Practices to Ease Documentative Overburden: A Sociotechnical Systems Perspective <i>Sri Ramesh Eevani and Rajiv Nag</i>	42
Personalized Automated Blood Glucose Forecasting for Type-1 Diabetes Using Machine Learning Algorithms <i>Avijay Sen, Dr. Sindhu Ghanta, and Pallavi Bajpai</i>	47
NextStep: Optimizing Healthcare Resource Delivery Using a Multilingual Artificial Intelligence Assistant <i>Abhinav Kona and Bibek Samal</i>	55
A Dual-Approach to Benign and Malignant Tumor Detection: Classification and Segmentation Using Advanced Deep Learning Models <i>Caitlin Dosch and Shilpi Shaw</i>	61
Determinants of User Trust in an AI-enabled System in the Development Stage <i>Pi-Yang Weng</i>	68