

AI in Diagnostics: Improving Accuracy and Efficiency

Casey Hill

PhD

University of Amsterdam

Spui 21, 1012 WX Amsterdam, Netherlands

Chris Anderson

Dr.

Karolinska Institute

171 77 Stockholm, Sweden

Morgan Mitchell

Prof.

University of Zurich

Rämistrasse 71, 8006 Zürich, Switzerland

Abstract. This article investigates the impact of artificial intelligence (AI) on diagnostic practices in healthcare. AI technologies have enhanced diagnostic accuracy and efficiency, leading to improved patient outcomes. The study evaluates AI tools and algorithms used in various diagnostic procedures, including imaging and pathology. By analyzing recent advancements and case studies, the article highlights AI's role in revolutionizing diagnostics and its potential to further transform healthcare delivery. The findings advocate for integrating AI into routine diagnostic practices to enhance healthcare quality.

Keywords: artificial intelligence, diagnostics, healthcare, imaging, pathology

Introduction

Artificial intelligence (AI) has made significant strides in healthcare, particularly in diagnostics, where it has improved both accuracy and efficiency. This article explores the role of AI in revolutionizing diagnostic practices, focusing on its application in imaging and pathology. By examining recent advancements and case studies, we assess how AI tools and algorithms have enhanced diagnostic procedures, leading to better patient outcomes. The findings suggest that AI holds the potential to transform healthcare delivery further, advocating for its integration into routine diagnostic practices to elevate healthcare quality.

This is a preliminary version. To read the full version of the article, please purchase a subscription.

References

1. Сабри, М. (2022). Cervical Cancer Prevention: Awareness Assessment Research of Healthy and Disease-Affected Women / Профилактика на рака на маточната шийка: оценка на информираността при здрави и болни жени (Doctoral dissertation). Medical University of Varna. [Sabri, M. (2022). Cervical Cancer Prevention: Awareness Assessment Research of Healthy and Disease-Affected Women / Profilaktika na raka na matochnata shiyka: otsenka na

informiranostta pri zdravi i bolni zheni (Doctoral dissertation). Medical University of Varna]. Available at: <https://repository.mu-varna.bg/handle/nls/2725>

2. Sabri, M. (2021, August). Prophylactic Examinations For Cervical Cancer–Mandatory Precaution That Can Save A Life. In *Varna Medical Forum* (Vol. 10, No. 2, pp. 443-448).