



MUHAMMAD ADIL

Curriculum Vitae

Qualifications

- 2021-23 **MS (Computer Science)**, [COMSATS University Islamabad](#), Islamabad 44000, Pakistan, CGPA 3.17.
- 2017-21 **BS (Information Technology)**, [University of Education](#), D.G. Khan Campus, D. G. Khan 32200, Pakistan, CGPA 3.41.

MS Thesis

Title *A Conceptual Framework for Heart Disease Detection and Analysis using Cloud based Machine Learning*

Abstract The chronic heart disease is a leading cause of deaths in the World. The timely identification of heart disease is important to reduce the death ratio. After 2020, the global health crisis increased due to Coronavirus disease (COVID-19). The people started avoiding visiting health professionals and hospitals. They started adopting different methods to diagnose diseases such as reading online medical blogs and self-diagnosis systems by entering one's symptoms over the Internet. Such methods have been misinterpreted and wrong assumptions have been developed about cause of heart disease. Various systems have been presented to predict heart disease using Machine Learning (ML). In this paper, we have proposed system model using Deep Learning (DL). In phase 1, the proposed system model is developed using a hybrid of Deep Boltzmann Machine (DBM) and Residual Network (ResNet) models. In phase 2, a hybrid of Variational Autoencoder (VAE) and GoogLeNet is developed. Further, Synthetic Minority Oversampling Technique (SMOTE), Localized Random Affine Shadowsampling (LoRAS) and Proximity Weighted Random Affine Shadowsampling (ProWRAS) are used for data balancing, and standard scaling is used to observe means value 0 and standard deviation 1. The Center for Disease Control (CDC) dataset is used in the proposed system model. The input data is reshaped into 1D as the data is in a tabular form. The proposed system model is validated using accuracy, F1 score and recall classification metrics.

Keywords CDC Dataset, DBM, Deep Learning, GoogLeNet, Heart Disease, ResNet, VAE

Supervisor [Prof. Dr. Nadeem Javaid](#)

BS Final Year Project

Title *Website: University of Education, D.G. Khan Campus*

Abstract The main purpose of the website is to know all the information about campus faculty, courses offered and services provided by campus and to apply online for admission.

Supervisor [Mr. Ghulam Yasin](#)

Publications

Journals

- [1] Muhammad Adil, Nadeem Javaid, et al., "A Conceptual Framework for Heart Disease Prediction using Cloud based Deep Learning", (Revision Submitted), Biomedical Signal Processing and Control (Impact Factor= 5.1), 2023.
- [2] Muhammad Adil, Nadeem Javaid, et al., "Deep Learning for Heart Disease Prediction: Integrating Hybrid Models and Balancing Techniques for Improved Accuracy", (Under Review), Journal of Cloud Computing (Impact Factor= 3.4), 2023.

Skills

Intermediate Python, Data Analytic, C++

Experience

Position **Lecturer (Contract-based)**

Federal Urdu University of Arts, Science and Technology ([FUUAST](#)), Islamabad, Islamabad 44000, Pakistan

- From Oct. 2023 to till date

Position **Research Associate**

Communication over Sensors ([ComSens](#)) Research Lab, Department of Computer Science, COMSATS University Islamabad, Islamabad 44000, Pakistan

- From Oct. 2021 to Sep. 2023

Responsibilities Provided guidance and mentorship to junior researchers, offering support for their research projects.

Position **Internee**

University of Education, Lahore. D.G. Khan Campus, Pakistan

- From Oct. 2020 to Feb. 2021

Responsibilities Provided technical support to campus faculty during COVID-19.

Achievements

2021-2023 **Punjab Educational Endowment Fund (PEEF) Master Level Scholarship**
For MS Computer Science

References

Professor [Prof. Dr. Nadeem Javaid](#)

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