

Saudi Journal of Technical and Vocational Training

A Refereed Journal Issued By The General Directorate
Of Research & Studies at TVTC

Second Edition, 2020





Saudi Journal of Technical and Vocational Training

A Refereed Journal Issued By The General Directorate
Of Research & Studies at TVTC

Second Edition, 2020

All opinions expressed in this Journal reflect the views of the authors and do not necessarily reflect the viewpoint of the Journal

General Administration for Research and Studies Technical and Vocational Training Corporation

Mailing Address

https://www.tvtc.gov.sa/journal/journal-main.html

E-mail: sj@tvtc.gov.sa

Deposit No. 1441/9504 on 21/09/1441 ISSN-E (1658/8576)





Chief Editor

Dr. Abdullah Ali Bahattab

Associate Professor; Computer Technology Department College of Telecom & Electronics abahattab1@tvtc.gov.sa

Deputy Chief Editor

Adel Abdullah Aloud

Director General – Directorate of Research & Studies aaloud@tvtc.gov.sa

Editorial Board

Dr. Ahmed A. AlkhalifahDr. Abdullah M. Alhomaidanaalkhalifah1@tvtc.gov.saaalhomaidan@tvtc.gov.sa

Dr. Sulaiman Abdulkhalig Al-Hifzi
sulaimana@tvtc.gov.sa

Dr. Abu-obaideh Alazzam
abuobaideh.a@tvtc.gov.sa

Dr. Ayman G. Khalifa a.ghanem@tvtc.gov.sa

Editorial Coordinator

Mohammed Abdullah Algarni m.algarni@tvtc.gov.sa