

# **2021 3rd International Conference on Advancements in Computing (ICAC 2021)**

**Colombo, Sri Lanka  
9 – 11 December 2021**



**IEEE Catalog Number: CFP21V93-POD  
ISBN: 978-1-6654-0863-9**

**Copyright © 2021 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP21V93-POD
ISBN (Print-On-Demand):	978-1-6654-0863-9
ISBN (Online):	978-1-6654-0862-2

**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  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## TABLE OF CONTENTS

<b>AGRO-MATE: A VIRTUAL ASSISTER TO MAXIMIZE CROP YIELD IN AGRICULTURE SECTOR.....</b>	<b>1</b>
<i>S. Dayalini; M. Sathana; P. R. N. Navodya; R. W. A. I. M. N. Weerakkodi; Anuradha Jayakody; Narmada Gamage</i>	
<b>APPLICATION OF RFID AND IOT TECHNOLOGY INTO SPECIMEN LOGISTIC SYSTEM IN THE HEALTHCARE SECTOR .....</b>	<b>7</b>
<i>Mya Myet Thwe Chit; Wattanasak Srisiri; Atchaisai Sirintantikorn; Narisorn Kongruttanachok; Watit Benjapolakul</i>	
<b>EFFECTIVENESS OF STOCK INDEX FORECASTING USING ARIMA MODEL: EVIDENCE FROM NEW ZEALAND .....</b>	<b>13</b>
<i>Wajira Dassanayake; Iman Ardekani; Narmada Gamage; Chandimal Jayawardena; Hamid Sharifzadeh</i>	
<b>E-LEARN DETECTOR: SMART BEHAVIOUR MONITORING SYSTEM TO ANALYZE STUDENT BEHAVIOURS DURING ONLINE EDUCATIONAL ACTIVITIES .....</b>	<b>19</b>
<i>Bamunuge H. K. T.; Hansika M. Perera; Sashinika Kumarage; P. A. P. Savindri; Dharshana Kasthurirathna; Archchhana Kugathasan</i>	
<b>DYNAMIC USER INTERFACE PERSONALIZATION BASED ON DEEP REINFORCEMENT LEARNING.....</b>	<b>25</b>
<i>K. G. G. H. Silva; W. A. P. S. Abeyasekare; D. M. H. E. Dasanayake; T. B. Nandisena; Dharshana Kasthurirathna; Archchhana Kugathasan</i>	
<b>MOBILE BASED SOLUTION FOR VEHICLE ASSISTANCE.....</b>	<b>31</b>
<i>M. A. D. Wickrama; D. S. C. Dharmakeerthi; S. A. Balasooriya; U. M. I. S. Ekanayake; M. P. Gamage; Nelum Amarasinghe</i>	
<b>IMPROVE THE EFFICIENCY AND SECURITY BY DIGITALIZING THE SRI LANKAN POLICE DEPARTMENT .....</b>	<b>37</b>
<i>K. Yapa; A. N. Senaratne; R. P. D. T. D. Pathirathna; Y. P. C. N. Priyamantha; W. D. S. Dias; B. Katukithulgala</i>	
<b>HOPON: A PERSONALIZED RIDE-SHARING SYSTEM BASED ON SOCIO-ECONOMIC FACTORS .....</b>	<b>43</b>
<i>Avishka Thilakarathne; Nishith Pinnawala; Kaveesha Wijerathna; Kaushalya Senavirathna; Sasini Wellalage; Janaka L. Wijekoon</i>	
<b>OPTIMIZATION OF MICROSERVICES SECURITY.....</b>	<b>49</b>
<i>D. C. Kalubowila; S. M. Athukorala; B. A. S. Tharaka; H. W. Y. R. Samarakkera; Udara Srimath S. Samaratunge Arachchilage; Dharshana Kasthurirathna</i>	
<b>INCOV CHAMBER: AN IOT BASED INTELLIGENT CHAMBER TO MONITOR AND IDENTIFY POTENTIAL COVID-19 POSITIVE PATIENTS .....</b>	<b>55</b>
<i>Rashini K. Liyanarachchi; Manujaya Premathilaka; Hirumi Samarawickrama; Nuwana Thilakasiri; Sasini Wellalage; Janaka L. Wijekoon</i>	
<b>AN AUTOMATED SOLUTION FOR SECURING CONFIDENTIAL DOCUMENTS IN A BYOD ENVIRONMENT.....</b>	<b>61</b>
<i>P. A. C Abisheka; M. A. F Azra; A. V Poobalan; Janaka Wijekoon; Kavinga Yapa; Mifraz Murthaja</i>	
<b>COMPREHENSIVE SECURITY SOLUTION FOR AN INDUSTRY 4.0 GARMENT MANUFACTURING SYSTEM.....</b>	<b>67</b>
<i>Dasunpriya Kalpara; Udara De Alwis; Anuka Jinadasa; Dinuwan Randunu; Wellalage Sasini Nuwanthika; Pradeep K. W. Abeygunawardhana</i>	
<b>SMART OFFICE AUTOMATION SYSTEM FOR COVID PREVENTION.....</b>	<b>73</b>
<i>R. A. D. S. Rajapaksha; L. S. Costa; P. L. U. S. C. Prasanna; A. P. D. Disanayaka; A. N. Senaratne; Janaka L. Wijekoon</i>	
<b>IOT-BASED MONITORING SYSTEM FOR OYSTER MUSHROOM FARMING .....</b>	<b>79</b>
<i>Y. D Surige; Perera W. S. M; Gunarathna P. K. N; Ariyarathna K. P. W; Narmada Gamage; Dasuni Nawinna</i>	
<b>AUTONOMOUS CYBER AI FOR ANOMALY DETECTION .....</b>	<b>85</b>
<i>K. A. N. Madhuvanthan; M. H. Hussain; H. W. D. T De Silva; U. I. D. Liyanage; Lakmal Rupasinghe; Chethana Liyanapathiran</i>	
<b>WOKNACK – A PROFESSIONAL SOCIAL MEDIA PLATFORM FOR WOMEN USING MACHINE LEARNING APPROACH.....</b>	<b>91</b>
<i>Sutharshan Shanmugarajah; Ashvini Praisoody; Md Rakib Uddin; Vinojan Paskkaran; Hansi De Silva; Janani Tharmaseelan; Thusithanjana Thilakarathna</i>	
<b>DATA-DRIVEN BUSINESS INTELLIGENCE PLATFORM FOR SMART RETAIL STORES.....</b>	<b>97</b>
<i>D. R. M. R. R. D. R. S. Eheliyagoda; T. K. G. Liyanage; D. C. Jayasooriya; D. P. Y. C. A. Nilmini; Dasuni Nawinna; Buddhima Attanayaka</i>	

<b>CRIME ANALYSIS, PREDICTION AND SIMULATION PLATFORM BASED ON MACHINE LEARNING.....</b>	103
<i>Isuru Sachitha Herath; Randima Dinalankara; Udaya Wijenayake</i>	
<b>CONSUMER AND FARMER CENTRIC SUBSCRIPTION BASED ORGANIC VEGETABLE/FRUIT DELIVERY SYSTEM .....</b>	109
<i>T. M. N. P. Karunaratna; M. M. A. Kumari; W. D. K. A. Kulasinghe; T. L. Parana Liyanage; Nuwan Kodagoda; Kushnara Suriyanwasa; Disna Kumari</i>	
<b>APLUS: AN INTELLIGENT LECTURE DELIVERY SYSTEM USING ARTIFICIAL INTELLIGENCE LEARNING ANALYTICS .....</b>	116
<i>Charith Kodagoda; Vihanga Madampe; Ridmi Ekanayake; Nirma De Silva; Malitha Wijesundara; Pramadhi Atapattu</i>	
<b>E-LEARNING PLATFORM FOR HEARING IMPAIRED STUDENTS .....</b>	122
<i>Niroshan Krishnamoorthy; Accash Raveendran; Pirathikaran Vadiveswaran; Sangeeth Raj Arulraj; Kalpani Manathunga; Samanthi Siriwardana</i>	
<b>ASD SCREENING FOR TODDLERS VIA PHYSICAL INTERPRETATION THROUGH ADVANCED AI .....</b>	128
<i>Dinush Jayasekera; Hasini Alwis; Harshana Dissanayaka; Rashmika Mudalinayake; Vijani Piyawardana; Koliya Pulasinghe</i>	
<b>AUTOMATED SINHALA NEWS PLATFORM BASED ON MACHINE LEARNING AND DEEP LEARNING.....</b>	134
<i>N. P. G. Ashani Malsha; K. Dulmini Heshani; R. Kavishka Ransara; D. M. D. D. Ayesh Bandara; P. K. Suriyaa Kumari; Thilmi Anuththara Kuruppu</i>	
<b>PERFORMANCE EVALUATION FOR RELAY SELECTION ON DEVICE-TO-DEVICE (D2D) COMMUNICATIONS IN RAYLEIGH FADING .....</b>	140
<i>Wen Hui Woo; Robithoh Annur; Vasaki Ponnusamy</i>	
<b>LUMOZ – A REAL TIME AUGMENTED REALITY BASED TOOL FOR MEDIA PRODUCTION .....</b>	146
<i>M. P. W. P. A Wanigasekara; A. Vihanga Nivarthan; R. M. B Awantha Thilan; G. M. J. U Gankanda; Thusithanjana Thilakarathna; Shyam Royal</i>	
<b>USE OF NATURAL LANGUAGE PROCESSING AND DEEP LEARNING TOWARDS GUIDING HEALTHY CHOLESTEROL FREE LIFE .....</b>	152
<i>Dilith Sasanka; H. K. N Malshani; Uchiitha I. Wickramaratne; Yashmitha Kavindi; Muditha Tissera; Buddhima Attanayaka</i>	
<b>DOGODO: IOT BASED MOBILE APPLICATION TO PROVIDE ESSENTIAL HEALTH SERVICES TO DOGS .....</b>	158
<i>L. V. I. S. Thilakarathne; M. S. Salay; M. G. R. Wijethilaka; T. S. Chethana Fernando; Disni Sriyaratna; Shalini Rupasinghe</i>	
<b>VOYAGER – SMART TRAVEL GUIDANCE CROSS PLATFORM MOBILE APPLICATION .....</b>	163
<i>W. A. K. D. Wijesinghe; A. G. L. D. P. Amarasinghe; T. M. U. A. Bandara; Aruna Ishara Gamage; Devanshi Ganegoda</i>	
<b>MODELLING WIKIPEDIA’S INFORMATION QUALITY USING INFORMATIVENESS, RELIABILITY AND AUTHORITY .....</b>	169
<i>Chinthani Sugandhika; Supunmali Ahangama; Sapumal Ahangama</i>	
<b>COMPUTER VISION FOR AUTONOMOUS DRIVING .....</b>	175
<i>Bimsara Kanchana; Rojith Peiris; Damitha Perera; Dulani Jayasinghe; Dharshana Kasthurirathna</i>	
<b>DIGITAL PRESERVATION AND NOISE REDUCTION USING MACHINE LEARNING .....</b>	181
<i>Aravinda K. P.; Sandeepa K. G. H.; Sedara V. V.; Chamodya A. K. Y. L.; Tharindu Dharmasena; Pradeep K. W. Abeygunawardhana</i>	
<b>E-AGRIGO.....</b>	187
<i>T. Kartheepan; B. Sirigajan; K. Subangan; M. A Mohammed Azzam; Pradeepa Bandara; Mahaadikara M. M. D. J. T Hansika</i>	
<b>VIRTUAL DRESSING ROOM: SMART APPROACH TO SELECT AND BUY CLOTHES .....</b>	193
<i>Weerasinghe S. W. P. N. M.; Rajapaksha R. M. D. D.; Sathsara L. G. I.; Gunasekara H. S. D. N.; Dinuka R. Wijendra; Dilshan I. De Silva</i>	
<b>INDOOR AUTONOMOUS MULTI-ROBOT COMMUNICATION SYSTEM .....</b>	199
<i>Gunawardhana K. D. W.; Kularathana D. G. D. P.; Welagedara W. H.; Palihakkara H. E.; Pradeep K. W. Abeygunawardhana; Sasini Wellalage</i>	
<b>FULLY AUTOMATIC HYDROPONIC CULTIVATION GROWTH SYSTEM .....</b>	205
<i>Thalwatte A. M.; Ramasinghe U. G. K. L. P. S.; M. F. A. Sakee; Ikram M. M. M; Hansika Mahaadikara; Sasini Wellalage</i>	
<b>ENHANCE THE SAFETY MEASUREMENTS IN RAILWAYS WITH THE AID OF IOT AND IMAGE PROCESSING.....</b>	210
<i>Vedasingha K. S; Perera K. K. M. T.; Hathurusinghe K. I.; Akalanka H. W. I.; Nelum Amarasena; Nalaka R. Dissanayake</i>	

<b>SRIHEALTH: A SINGLE PLATFORM FOR MEAL PLANS, WORKOUTS, YOGA SCHEDULES BASED ON SRILANKAN LIFESTYLE .....</b>	216
T. H. G Malika Anusari; Banuja Yasasvi Amarasinghe; Geethma Kavishi Munasinghe; E. K. Koshila Nirmanie Epitawala; M. G. Nadeesa Pemadasa; Lokesh Weerasinghe	
<b>MOBILE BASED SOLUTION TO WEIGHT LOSS PLANNING FOR CHILDREN (WITH OBESITY) IN SRI LANKA .....</b>	222
R. M. M. P. K. Rajapakse; J. M. A. I. Mudalige; L. A. D. Y. S. Perera; R. N. A. M. S. C. B. Warakagoda; Samanthi Siriwardana	
<b>AUTOMATED CROP HARVESTING, GROWTH MONITORING AND DISEASE DETECTION SYSTEM FOR VERTICAL FARMING GREENHOUSE .....</b>	228
Charith Jayasekara; Sajani Banneka; Gihan Pasindu; Yukthi Udawaththa; Sasini Wellalage; Pradeep K. W. Abeygunawardhane	
<b>ARTIFICIAL INTELLIGENCE-BASED BUSINESS STRATEGY FOR OPTIMIZED ADVERTISING .....</b>	234
Lahiru Kannangara; Supun Harsha; Thushan Isuru; Chandula Wijesiriwardhane; Dinuka R Wijendra; Jenny Kishara	
<b>COMPUTER VISION ENABLED DROWNING DETECTION SYSTEM .....</b>	240
Upulie Handalage; Nisansali Nikapotha; Chanaka Subasinghe; Tereen Prasanga; Thusithanjana Thilakarathna; Dharshana Kasthurirathna	
<b>GUIDED VISION: A HIGH EFFICIENT AND LOW LATENT MOBILE APP FOR VISUALLY IMPAIRED .....</b>	246
Tharik Rizan; Vishwa Siriwardena; Mohamed Raleen; Lakshan Perera; Dharshana Kasthurirathna	
<b>EARLY WARNING FOR PRE AND POST FLOOD RISK MANAGEMENT BY USING IOT AND MACHINE LEARNING .....</b>	252
S. P. M. K. W. Ilukkumbe; V. Y. Samarasiri; M. F. Mohamed; V. Selvaratnam; U. U. Samantha Rajapaksha	
<b>DATABASE SCALING ON KUBERNETES .....</b>	258
H. C. S. Perera; T. S. D. De Silva; W. M. D. C. Wasala; R. M. P. R. L. Rajapakshe; N. Kodagoda; Udara Srimath S. Samaratunge; H. H. N. C. Jayanandana	
<b>AI BASED MONITORING SYSTEM FOR SOCIAL ENGINEERING .....</b>	264
K. Yapa; S. W. I. Udara; U. P. B. Wijayawardane; K. N. P. Kularatne; N. M. P. P. Navaratne; W. G. V. U Dharmaphriya	
<b>INTELLIGENT VIOLENCE VIDEO DETECTION SYSTEM .....</b>	270
H. Kishara Buddika Jayasanka; B. M. Rashitha Dileeshan Batugedara; K. D. C. D. Ruwan Diyunuge; T. H. D. Yehan Malith Jayasekara; Dilani Lunugalage; Udara Srimath S. Samaratunge Arachchillage	
<b>COMPUTER-VISION ENABLED WASTE MANAGEMENT SYSTEM FOR GREEN ENVIRONMENT .....</b>	276
Pasindu Hewagamage; Amith Mihiranga; Dananjaya Perera; Rahul Fernando; Thusithanjana Thilakarathna; Dharshana Kasthurirathna	
<b>SMART MONITORING AND DISEASE DETECTION FOR ROBOTIC HARVESTING OF TOMATOES .....</b>	282
Imesh Pasindu; Sumeera Viraj; Ravindu Dilshan; Akshith Kalhara; Oshada Senaweera; Rajitha De Silva; Chandimal Jayawardena	
<b>VIRTUAL MAKEOVER AND MAKEUP RECOMMENDATION BASED ON PERSONAL TRAIT ANALYSIS .....</b>	288
P. R. H. Perera; E. S. S. Soysa; H. R. S. De Silva; A. R. P. Tavarayan; M. P. Gamage; K. M. L. P. Weerasinghe	
<b>AI BASE E-LEARNING SOLUTION TO MOTIVATE AND ASSIST PRIMARY SCHOOL STUDENTS .....</b>	294
P. H. D. D Silva; S. A. V. D. Sudasinghe; P. D. U. Hansika; M. P. Gamage; M. P. A. W. Gamage	
<b>A SENSITIVE DATA LEAKAGE DETECTION AND PRIVACY POLICY ANALYZING APPLICATION FOR ANDROID SYSTEMS (PRIVOT) .....</b>	300
H. N. Atapattu; W. S. N. Fernando; J. P. A. K Somasiri; P. M. K. Lokuge; A. N. Senarathne; Muditha Tissera	
<b>MACHINE LEARNING-BASED PREDICTION MODEL FOR ACADEMIC PERFORMANCE .....</b>	305
S Tharsha; J Dilogera; B Mohanashiyam; S Kirushan; K. B. A. B. Chatthurika; N. H. P. Ravi Supunya Swarnakantha	
<b>STANDALONE APPLICATION AND CHROMIUM BROWSER EXTENSION-BASED SYSTEM FOR ONLINE EXAMINATION CHEATING DETECTION .....</b>	311
Samadhi Kariyawasam; Anjana Lakshan; Anuranaga Liyanage; Kaveesha Gimhana; Vijani Piyawardana; Yashas Mallawarachchi	
<b>DEEP TRANSFER LEARNING APPROACH FOR FACIAL AND VERBAL DISEASE DETECTION .....</b>	317
Dilki Madara Manage; A. M. Ishan Shavinda Alahakoon; Kavindi Weerathunga; Thenuka Weeratunga; Dilani Lunugalage; Hansi De Silva	

<b>SMARTCOACH: COMPREHENSIVE TUTOR RECOMMENDER AND STUDENT ATTENTIVENESS MEASURING PLATFORM.....</b>	323
<i>H. D. K. Samarasekara; H. M. P. Hansaka; S. D. D. Rajapaksha; W. A. D. G. Tharaka; Kalpani Manathunga; Disni Charuka Sriyaratna</i>	
<b>STRESS ANALYSIS AND CARE PREDICTION SYSTEM FOR ONLINE WORKERS.....</b>	329
<i>A. A. S. M Amarasinghe; I. M. S. Malassri; K. C. N. Weerasinghe; I. B. Jayasingha; Pradeep K. W. Abeygunawardhana; Suranjini Silva</i>	
<b>ACADEMIC DEPRESSION DETECTION USING BEHAVIORAL ASPECTS FOR SRI LANKAN UNIVERSITY STUDENTS .....</b>	335
<i>Madhuransi Agrahere Gamage; Ranuwini Matara Arachchi; Sawandi Naotunna; Tharushi Rubasinghe; Chamari Silva; Samanthi Siriwardana</i>	
<b>ACCOMMODATION FINDER: AN AUGMENTED REALITY BASED MOBILE APPLICATION INTEGRATED WITH SMART CONTRACTS .....</b>	341
<i>G. Parameswaran; M. J. F. R. Perera; C. R. B. Aluthgedara; E. D. N. Amanda; W. G. A. Ishara; D. Ganegoda</i>	
<b>NON-COMMUNICABLE DISEASES DETECTION SYSTEM.....</b>	347
<i>H. R Thudawehewa; U. C. B. Pathmakulasooriya; W. A. P. T. Jayawardhana; C. G. Wellehewa; Chamari Silva; Pasangi Rathnayake</i>	
<b>CAREER AURA – SMART RESUME AND EMPLOYMENT RECOMMENDER.....</b>	353
<i>Kavindi Dissanayake; Senidu Mendis; Randula Subasinghe; Dineth Geethanjana; Dilani Lunugalage; Dharshana Kasthurirathna</i>	
<b>SENTINELPLUS: A COST-EFFECTIVE CYBER SECURITY SOLUTION FOR HEALTHCARE ORGANIZATIONS .....</b>	359
<i>Kushan Janith; Ruween Iddagoda; Chamitha Gunawardena; Kalana Sankalpa; Kavinga Yapa Abeywardena; Kanishka Yapa</i>	
<b>PHARMAGO-AN ONLINE PHARMACEUTICAL ORDERING PLATFORM.....</b>	365
<i>Ranula Gihara Gamage; Nandana Senarath Bandara; Dunya Dulashani Diyamullage; Kanchala Upethri Senadeera; Kavinga Yapa Abeywardena; Nelum Amarasinghe</i>	
<b>MOBILE MEDICAL ASSISTANT AND ANALYTICAL SYSTEM FOR DENGUE PATIENTS.....</b>	371
<i>K. T. K. Jayampathi; M. A. C. Jananjaya; E. P. C. Fernando; Y. A. Liyanage; M. G. N. M. Pemadasa; G. W. D. A. Gunarathne</i>	
<b>EDUHELP – AN ONLINE TUTORING APPLICATION.....</b>	377
<i>S. R. Fernandopulle; W. M. C. D. B. Warnasooriya; J. M. H. N. Jayasinghe; S. M. D. Theeraj; Uthpala Samarakoon; Suriya Kumari</i>	
<b>PLATFORM INDEPENDENT BROWSER FORENSIC TOOL FOR ADVANCED ANALYSIS OF ARTIFACTS AND CASE MANAGEMENT .....</b>	383
<i>Dushan Dissanayake; Sadeepa Rajakaruna; Dulana Ranasinghe; Ayesha Wijesooriya; Anuradha Jayakody; Samantha Rajapaksha</i>	
<b>SENSOR-BASED EMOTION TRACKING SYSTEM FOR COMPUTER GAMES.....</b>	389
<i>W. R. M. G. K. Wickramasinghe; R. M. B. Devduni; D. T. C. B. Dasanayaka; M. N. N. Mohomed; Suriyaa Kumari; Thamali Dassanayake</i>	
<b>E-PATIENT CARD: AN INTEGRATED ELECTRONIC HEALTH RECORDING SYSTEM FOR PATIENT .....</b>	395
<i>K. W. Ashan Pivithuru; A. Srinivasan; A. Wijeratnam; I. Nassar; S. S. Chandrasiri; P. K. Suriyaa Kumari</i>	
<b>AIR POLLUTION MAPPING WITH SENSOR-BASED METHODOLOGY .....</b>	401
<i>W. G. C. N. Egodagama; A. A. M. Zahid; G. P. T. S. Pathirana; Dissanayaka D. S.; Bhagyani Chathurika; Ravi Supunya</i>	
<b>PERSONALIZED ASSISTIVE LEARNING SYSTEM FOR PRIMARY EDUCATION .....</b>	407
<i>Y. M. T. S. Yapa; W. S. I. Fernando; W. H. M. K. Sampath; K. D. D. I. Kodithuwakku; Udara Srimath S. Samaratunge Arachchillage; Dilani Lunugalage</i>	
<b>JESSY: AN INTELLIGENCE TRAVEL ASSISTANT .....</b>	413
<i>K. K. D. N. Dilshan; U. M. D. M. Parussella; H. M. C. J. Herath; C. A. J. P. Chandranath; Samantha Thelijjagoda; Thilini Jayalath</i>	
<b>PRICE OPTIMISATION AND MANAGEMENT .....</b>	419
<i>M. T. M Shafkhan; P. R. S. S Jayasundara; K. A. D. R. L Kariyapperuma; H. P. S Lakruwan; Lakmal Rupasinghe</i>	
<b>CRICKET SHOT IMAGE CLASSIFICATION USING RANDOM FOREST .....</b>	425
<i>Mithelan Devanandan; Vithurson Rasaratnam; Manoj Karthik Anbalagan; Narthanen Asokan; Rrubaa Panchendrarajan; Janani Thermaseelan</i>	
<b>SYMPTOMATIC ANALYSIS PREDICTION OF KIDNEY RELATED DISEASES USING MACHINE LEARNING .....</b>	431
<i>Dulitha Lansakara; Thinusha Gunasekera; Chamara Niroshana; Imali Weerasinghe; Pradeepa Bandara; Dinuka Wijendra</i>	

<b>AUTO TRAINING AN AI FOR DETECTING PLANT DISEASE USING TWITTER DATA ANNEXED WITH A PLANT ANTHOLOGY .....</b>	437
<i>Niroshini Vasanthan; Mohamed Shimran; Ahmadu Ahkam; Ishma Ishak; Chamari Silva; Thilmi Anuthithara Kuruppu</i>	
<b>SALES OPTIMIZATION SOLUTION FOR FASHION RETAIL .....</b>	443
<i>N. B. Ganhewa; S. M. L. B. Abeyratne; G. D. S. Chaturika; Dilani Lunugalage; Dilshan De Silva</i>	
<b>SMART INTELLIGENT FLORICULTURE ASSISTANT AGENT (SIFAA) .....</b>	449
<i>Udara Srimath S. Samaratunge Arachchilage; D. H. L. Amarasinghe; M. C. Kirindegamaarachchi; Asanka B. L.; Fernando W. M. K. S. S. W.</i>	
<b>A NEW APPROACH FOR CONSUMER PROTECTION WITH BUSINESS INTELLIGENCE AND DATA VISUALIZATION .....</b>	455
<i>K. S. T. U. S. Kariyawasam; L. A. A. S. Liyanaarachchi; H. M. N. N. Chatthurabhani; Anuradha Jayakody; Buddhima Attanayaka</i>	
<b>PERMISSIONED BLOCKCHAIN PLATFORM TO ENHANCE SCALABILITY, SECURITY AND PERFORMANCE ISSUES IN LIVESTOCK FARMS IN SRI LANKA .....</b>	461
<i>W. A. C. L. Rathnayaka; K. P. N. Jayasena</i>	
<b>SALFIX: SOLUTIONS FOR SMALL BUSINESSES USING ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING .....</b>	467
<i>Tavish Perera; Lakshini Kuganandamurthy; Thilrash Ameen; Thamali Dassanayake; Devanshi Ganegoda</i>	
<b>MACHINE LEARNING-BASED SMART SHOPPING FOR VISUALLY IMPAIRED .....</b>	473
<i>Nagaraj Nagenthiran; Paramananthan Priyantha; Segar Nirosha; Jeevanaraj Vivek; Hansi De Silva; Disni Sriyaratna</i>	
<b>HUMAN AND ORGANIZATIONAL THREAT PROFILING USING MACHINE LEARNING .....</b>	479
<i>P. M. I. N. Kumara; K. G. S. Dananjaya; N. P. N. H. Amarasena; H. M. S. Pinto; Kanishka Yapa; Lakmal Rupasinghe</i>	
<b>ROBUST SPEECH ANALYSIS FRAMEWORK USING CNN .....</b>	485
<i>Lakmal Rupasinghe; Alahendra A. M. A. T. N; Ranathunge R. A. D. O; Perera P. S. D; Kulathunge Y. N</i>	
<b>EVENT-DRIVEN MALICIOUS URL EXTRACTOR .....</b>	491
<i>Sinhala Welandage Sajeth Jonathan; Renu Harshatha Arunaasalam; A. N. Senarathne; Vimukthi Wishvajith; Aneesha M. Ramanayaka; Kanishka Yapa</i>	
<b>Author Index</b>	