Table of Contents

A Hidden Markov Model-Based Approach for Stock Market Return Direction Prediction	1
Dima Alnahas and Safa Yasin Müjdeci	
A Metric for Measuring Test Input Generation Effectiveness of Test Generation Methods for Boolean Expressions	8
Deniz Kavzak Ufuktepe, Ekincan Ufuktepe and Tolga Ayav	
A Performance Study Depending on Execution Times of Various Frameworks in Machine Learning Inference	14
Murat Sever and Sevda Öğüt.	
A Usability Study on Data Provenance Visualization Approaches	19
Ilkay Melek Yazici and Mehmet S. Aktas	
A Coverage Measurement Method for GUI Test Cases on Android Applications	25
Merve Melis Mirza and Alper Şen	
Bimar Software Quality Portal: Experience and Lessons Learned Serkan Apul	28
Clock Drift Analysis in A Multihost System	31
Gökhan Bilekdemir	
Comparison Of Ant Colony Optimization and Artificial Bee Colony Algorithms for Solving Electronic Support Search Dwell Scheduling Problem	36
Okan Erkut and Fırat Hardalaç	

CPS: A Tool for Classification and Prediction of Autism With STA Using Eye- Tracking Data	43
Eda Sütoğlu, Sena Sunar, Günseli Sevinç, Pınar Dilbaz, Şükrü Eraslan and Yeliz Yeşilada	
Data Model Extension Impact Analysis	49
Ersin Ersoy and Hasan Sozer	
Dexmo Software Product Line and Product Composition Method Onur Leblebici	55
Digital Customer Acquisition and Onboarding During the Pandemic Serenay Ünüvar Yenen and Gökçin Şahin	61
Digital Storytelling on A Virtual Heritage Museum with Believable Agents Ulaş Güleç, Murat Yilmaz, Kaan Kalan, Hasan Saygın Dikbayır, Oğulcan Merdivanlı, Utku Mert Değirmenci and Paul Clarke	65
Embedded Software Architecture Development in Radar Systems Based on Product Line Approach	71
M.Hanşeref Yaşın, Şükrü Çalışır and Ali Özzeybek	
Fuzzy Cognitive Maps for Software Fault Prediction	74
Sedat Marangoz, Begum Mutlu and Ebru A. Sezer	
GDPR Compliant Audit Log Management System with Blockchain	80
Ulaş Aslan and Baha Şen	
Accelerating User Interface Testing Process with Genetic Algorithm Ramazan Koç, Alper Şen and İsmail Öztürk	83

Comparison of Sampling Methods Using Machine Learning and Deep Learning Algorithms with an Imbalanced Data Set for the Prevention of Violence Against Physicians	86
Hilal Çakır, Nilgün İncereis, Bekir Tevfik Akgün and Senem Yazgülü Taştemir	
Hybrid Probabilistic Timing Analysis	93
Levent Bekdemir and Cüneyt F. Bazlamaçcı	
How Scrum Inhibits Agility	99
Necmettin Ozkan and Mehmet Şahin Gök	
Software Effort Estimation Using ISBSG Dataset: Multiple Case Studies	107
Hüseyin Ünlü, Ali Görkem Yalçın, Dilek Öztürk, Güliz Akkaya, Mert Kalecik, Nazım Umut Ekici, Oğuzhan Orhan, Okan Çiftçi, Selen Yumlu and Onur Demirörs	
Mask Detection from Face Images Using Deeplearning and Transfer Learning	113
Ahmet Haydar Örnek, Mustafa Çelik and Murat Ceylan	110
Chainex Decentralized Application Development & Test Workbench	117
Ercan Işık, Melih Birim and Enis Karaarslan	
Effort Prediction for Microservices: A Case Study	121
Hüseyin Ünlü, Tuna Hacaloğlu, Onur Leblebici and Onur Demirörs	
Mutation Analysis of Specification-Based Contracts in Software Testing	127
Abbas Khalilov, Tugkan Tuglular and Fevzi Belli	
On The Use of Evolutionary Coupling for Software Architecture Recovery	133
Abdullah Saydemir, Muhammed Esad Simitcioglu and Hasan Sozer	

Patch Management of Satellite Flight Software	139
Ezgi Kutlu, Camal Gençtürk, Renda Yiğit and Feyza Nur Özcan	
Simpra: A Cloud Based Integrated Restaurant and Kitchen Management System	144
Murat Sıcakkanlı and Mehmet Göktürk	
Comparing Crowd Counting and Pedestrian Detection Methods on Social Distance Detection Mustafa Çelik and Ahmet Haydar Örnek	150
TEST-INT: A Testing Platform for Deep Learning Models Övgü Özdemir and Demet Demir	155
The Need for Model-driven Engineering in the Development of IoT Software for Public Transportation Systems	158
Sadık Arslan and Geylani Kardaş	
Automation and Test Software in Satellite Command and Control Systems: Procedure Executor	164
Sena Başbuğ, R. Çağrı Zeki, Muhammed Altay and Seçil Taburoğlu	
Functionality, Performance and Usability Tests of WebRTC Based Video Conferencing Products	167
Savaş Öztürk, Selma Eren Yetim, Ahmet Samet Şahin, Kaan Ceyhan, Muhammet Başaran, Gülay Köse Aslan and Olcay Öztanır	