Rajesh Kumar

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PROFESSIONAL PROFILE

Dr. Rajesh Kumar is an outstanding graduate of the University of Electronic Science and Technology of China. He won the academic performance award and outstanding graduate student at the University of Electronic Science and Technology of China from 2016 to 2019. He worked on two national projects with prof Xiaosong Zhang during 2017-2019 (including the 2019 National Natural Science Foundation Fund "Research on Intelligent Identification Method of IoT Malware Based on Android"). Additionally, he won the project "Blockchain Based Secure Data Sharing" from the University of Electronic Science and Technology Talent Special Fund in 2019. He has published more than 38 International Journal and Conference papers in the field of Deep Learning, Machine Learning, and Information Security. He has received government and university level projects in 2019 and 2020.

RESEARCH INTERESTS

• Network Security • Deep Learning • Machine Learning • Computer Vision • Blockchain technology

EDUCATION

UNIVERSITY OF ELECTRONICS SCIENCE AND TECHNOLOGY OF CHINA **PHD (Computer Science)**	**2016-2019**
UNIVERSITY OF SINDH, JAMSHORO **MS (Computer Science)**	**2014-2016**
UNIVERSITY OF SINDH, JAMSHORO **BS (Computer Science)**	**2010-2013**

EMPLOYMENT

YANGZI DELTA RIVER RESEACH INSTITUTE OF HUZHOU, UNIVERSITY OF ELECTRONICS SCIENCE AND TECHNOLOGY OF CHINA **Associate Professor**	**July 2021- Current**
UNIVERSITY OF ELECTRONICS SCIENCE AND TECHNOLOGY OF CHINA Advisor: Dr. Wang Wenyong **Postdoctoral Fellow**	**June 2019- June 2021**

▤ LIST OF SCI JOURNALS

S#	Tittle	Author Order	Journal Name	Date	Cited	Link
1	Blockchain-federated-learning and deep learning models for covid-19 detection using ct imaging.	1	IEEE SENSORS JOURNAL	15-07-2021	128	Open
2	An integration of blockchain and ai for secure data sharing and detection of ct images for the hospitals	1	Computerized Medical Imaging and Graphics	01-01-2021	48	Open
3	Research on data mining of permission-induced risk for android iot devices.	1	Applied Sciences-Basel	02-01-2019	28	Open
4	A multimodal malware detection technique for android iot devices using various features	1	IEEE ACCESS	23-05-2019	74	Open
5	An online semantic-enhanced graphical model for evolving short text stream clustering	4	IEEE Transactions on Cybernetics	30-09-2021	1	Open
6	Secure large-scale e-voting system based on blockchain contract using a hybrid consensus model combined with sharding	2	ETRI journal	01-04-2021	21	Open
7	A federated learning approach for privacy protection in context-aware recommender systems	2	Computer Journal (Oxford Press)	30-04-2021	3	Open
8	Making assembly line in supply chain robust and secure using UHF RFID	2	Scientific Reports	10-09-2021	5	Open
9	An efficient and provably secure ecc-based conditional privacy-preserving authentication for vehicle-to-vehicle communication in vanets	4	IEEE Transactions on Vehicular Technology	13-01-2021	19	Open
10	Visual features with spatio-temporal-based fusion model for cross-dataset vehicle re-identification	5	Applied Sciences-Basel	01-08-2020	9	Open
11	Adaptive wavelet based mri brain image de-noising	3	Frontiers in Neuroscience	22-08-2020	21	Open
12	Efficient hybrid clustering scheme for data delivery using internet of things enabled vehicular ad hoc networks in smart city traffic congestion.	6	Journal of Internet Technology	01-12-2020	9	Open
13	Efficient and deep vehicle re-identification using multi-level feature extraction	6	Applied Sciences-Basel	27-03-2019	17	Open
14	An adaptive multi-layer botnet detection technique using machine learning classifiers	3	Applied Sciences-Basel	11-06-2019	90	Open
15	Context-aware bidirectional neural model for sindhi named entity recognition	4	Applied Sciences-Basel	28-09-2021	-	Open
16	Trends in vehicle re-identification past, present, and future: a comprehensive review	5	Mathematics	27-11-2021	10	Open
17	Multi scale and direction target detecting in remote sensing images via modified YOLO-v4	3	IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing	01-06-2022	7	Open

⬛ LIST OF BOOK CHAPTERS

S#	Tittle	Author Order	Book Name	Link
1	A survey of intelligent techniques for android malware detection	1	Malware Analysis Using Artificial Intelligence and Deep Learning (Spinger)	Open

⬛ LIST OF EI JOURNALS

S#	Tittle	Author Order	Journal Name	Date	Cited	Link
1	Simple and efficient computational intelligence strategies for effective collaborative decisions	2	Future Internet	21-01-2019	-	Open
2	Analysis of resnet and googlenet models for malware detection	3	Journal of Computer Virology and Hacking Techniques	28-09-2018	116	Open
3	Optimizing a deep learning model in order to have a robust neural network topology	2	International Journal of Modeling and Optimization	1-06-2018	1	Open
4	Modelling choice selection system of a public sector general university in pakistan	1	Sindh University Research Journal-SURJ (2016)	1-08-2016	1	Open

⬛ LIST OF CONFERENCES

S#	Tittle	Author Order	Journal Name	Date	Cited	Link
1	A survey of blockchain based on e-voting systems	2	Proceedings of the 2019 2nd International Conference on Blockchain Technology and Applications	09-12-2019	22	Open
2	Malicious code detection based on image processing using deep learning	1	International Conference on Computing and Artificial Intelligence (ICCAI 2018)"	12-03-2018	45	Open
3	Effective and explainable detection of android malware based on machine learning algorithms	1	International Conference on Computing and Artificial Intelligence (ICCAI 2018)	12-03-2018	20	Open
4	Malicious URL detection using multi-layer filtering model	1	The 14th International Computer Conference on Wavelet Active Media Technology and Information Processing (2017)	12-02-2018	17	Open
5	Evaluating the performance of deep neural networks for health decision making	3	8th International Congress of Information and Communication Technology (ICICT-2018)	27-01-2018	10	Open

6	Probabilistic time context framework for big data collaborative recommendation	4	International Conference on Computing and Artificial Intelligence (ICCAI 2018)	12-03-2018	2	Open
7	Evaluating the performance of resnet model based on image recognition	3	International Conference on Computing and Artificial Intelligence (ICCAI 2018)	12-03-2018	45	Open
8	Analysis of resnet model for malicious code detection	3	The 14th International Computer Conference on Wavelet Active Media Technology and Information Processing (2017)	02-07-2017	4	Open
9	Internet of things—smart traffic management system for smart cities using big data analytics	3	The 14th International Computer Conference on Wavelet Active Media Technology and Information Processing (2017)	02-07-2017	53	Open
10	A hybrid technique to detect botnets, based on p2p traffic similarity	2	2019 Cybersecurity and Cyberforensics Conference (CCC)	07-05-2019	20	Open
11	An improved convolutional neural network model for intrusion detection in networks	4	2019 Cybersecurity and Cyberforensics Conference (CCC)	07-05-2019	63	Open
12	Elimination of irrelevant features and heart disease recognition by employing machine learning algorithms using clinical data	5	The 17th International Computer Conference on Wavelet Active Media Technology and Information Processing (2020)	18-12-2020	-	Open
13	H3DNN: 3d deep learning based detection of covid-19 virus using lungs computed tomography	3	The 17th International Computer Conference on Wavelet Active Media Technology and Information Processing (2020)	18-12-2020	16	Open
14	A Non-Parametric Multi-Lingual Clustering Model for Temporal Short Text	2	The 17th International Computer Conference on Wavelet Active Media Technology and Information Processing (2020)	18-12-2020	2	Open
15	Neural Joint Model for Part-of-Speech Tagging and Entity Extraction	2	13th International Conference on Machine Learning and Computing (2021)	26-02-2021	-	Open
16	Blockchain Based Monitoring on Trustless Supply Chain Processes	3	6th International Conference on Cloud Computing and Big Data Analytics (2021)	24-04-2021	-	Open
17	Analyzing and battling the emerging variants of covid-19 using artificial neural network and blockchain	6	The 18th International Computer Conference on Wavelet Active Media Technology and Information Processing (2021)	10-12-2021		Open

📋⚙ PROJECTS

S#	Project Name	Date	Project Number	Project Source
1	Research on Blockchain Sharding Consensus (区块链分片共识研究)	2019/07 2021/07	Y030190236010 16201	China Postdoctoral Science Foundation
2	AI pattern recognition and COVID-19 blockchain security data sharing	2020/07 2021/07	Y125190285540 16524	University of Electronic Science and Technology of China
3	Research on Airline Passenger Luggage Tracing Technology Based on Electronic Tag 我们 自然科学基金项目：基于电子标签的航空旅客行李全程跟踪技术研究	2021/01 2024/12	U2033212	National Natural Science Foundation of China

4	Research on Intelligent Identification Method of IoT Malware Based on Android 基于 Android 的 IoT 恶意软件智能识别方法研究	2017/01 2019/07	61572115	National Natural Science Foundation of China

🧪 SKILLS

Leadership & Management Skills:

- ✓ Supervision of a Master's student for design projects for National Science Foundation of China.
- ✓ Led a team of data sharing security towards the Kaggle competition
- ✓ Organized weekly training with team-based challenges.
- ✓ Presented challenge solutions.

Programming Language Skills: • JAVA • C/C++, • Python,• Android • DotNet • PHP

Database Design Skills: Databases and Database Management of Enterprise Organization University of Sindh.

Computer Skills: Microsoft Office, Visual Studio, MYSQL, Adobe Photoshop

Advising and collaboration of Master's students:

- ✓ Binary Analysis Tool For Identification Variable Types In Binary Programs.
- ✓ Detecting Privacy Leaks Through Existing Android Frameworks.

🎓 CERTIFICATES

University of Electronic Science & Technology of China **Best Performance Award , China**	**2018**
Aims Academy, Pakistan **Microsoft Office**	**April 2011 to Aug 2011**
University of Sindh, Pakistan **Web Developer**	**1 year**
NETLYNIC I.T ACADEMY, Pakistan **Java, Android, Developer**	**Jan 2011 to JAN 2013**

📋 Real Time Project Development

Python Development:

- ✓ Blockchain based federated learning model for secure data sharing (Code).
- ✓ Federated learning for medical images (Code).
- ✓ Design a federated learning model for secure data sharing (Code).
- ✓ Android malware detection (Code).
- ✓ Cancer detection (Code).

Web Development:

- ✓ University of Sindh examination results.(Code) (http://exam.usindh.edu.pk/).
- ✓ University of Sindh admission results. (Code) (http://admission.usindh.edu.pk/).
- ✓ Book board website (http://www.stbb.edu.pk).

- ✓ Time table management system (http://timetable.usindh.edu.pk).
- ✓ School management system.

Android Development:

- ✓ SMS and call tracking system ([Code](#)).
- ✓ Online banking system ([Code](#)).
- ✓ Result information system using sms technology.
- ✓ Excel sms sender (Bulk SMS Sender).
- ✓ Puzzle game ([Code](#)).
- ✓ Annoying alarm system.
- ✓ Event notification system University of Sindh.
- ✓ Fees Payment System.

Java Development

- ✓ RFID based attendance management system.
- ✓ School management system ([Code](#)) (The Guardian School Hyderabad) .
- ✓ Laboratory management system ([Code](#))(Advance Lab Hyderabad) .

.Net Development

- ✓ Hospital management system.
- ✓ Shop management system.

Arduino Development

- ✓ Factory control using ethernet (Internet Technology).

Note: All projects source code available this link: https://github.com/raja21068/

PROFESSIONAL ACTIVITIES

Journal External Reviewer:

- ✓ IEEE Transactions on Information Forensics and Security.
- ✓ IEEE Internet of Things.
- ✓ Elsevier Computers & Security.
- ✓ IEEE ACCESS.

Conference External Reviewer:

- ✓ The 14th International Computer Conference on Wavelet Active Media Technology and Information Processing.
- ✓ The 15th International Computer Conference on Wavelet Active Media Technology and Information Processing.
- ✓ 2st Workshop on Cloud Security and Privacy.

TALKS

- ✓ **Key Note Speaker**: Challenges and Implications of blockchain with federated learning, "in Gundong 2019".
- ✓ **Presenter:** Malicious Code Detection: Image Processing Using Deep Learning: International Conference on Computing and Artificial Intelligence (ICAAI), Chengdu, China, March 2018.
- ✓ **Presenter:** Artificial Intelligence challenges and implantation to the current trends, AI Seminar in UESTC, 2019.

- ✓ **Presenter:** Latex and other research tools: Invited talk at Sichuan University.

👤 PERSONAL INFORMATION

Languages	Chinese, English, Sindhi & Urdu.
Hobbies	Watching Movies , Badminton, Table Tennis, Swimming, Books Reading & Jogging.