Rajesh Kumar

Website	https://raja21068.github.io/CV/
	http://faculty.uestc.edu.cn/KUMARRAJESH/
What's APP:	+92-3332836705
Email:	rajakumarlohano@gmail.com
Nationality:	Pakistan
WeChat #:	raja21066
Google Scholar:	Click Here
Linked in:	Click Here
Github:	Click Here

PROFESSIONAL PROFILE

I am 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. I 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, I 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 50 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)** Thesis Topic: Android Malware Detection based on Machine Learning. Published Papers: (Link1, Link2, Link3, Link4, Link5) and Project Funding (NSFC)		**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**
- ✓ I worked on two projects (Projects #1 and #4)
- ✓ Collected datasets and publish two papers (Paper List #2 and #3).

SOFTWARE AND WEB APPLICATION DEVELOPER
UNIVERSITY OF SINDH, Jamshoro,   **2014-2015**
Pakistan (**Internship**)

🧪 Teaching Experience

Associate Professor Huzhou UESTC (2021 to Current):

- ✓ Teaching various subjects to students with lectures, tutorials, labs and coursework.
- ✓ Supervise Master Students.
- ✓ Teach Java, Database, Data structure, C++, Deep Learning, Research Methodology, and Blockchain.
- ✓ Undertake research activities and make significant contributions to the field of Computer Vison Projects.

Private Center AIMS IT Pakistan (2014-2016):

- ✓ Teach Java Programing Language.
- ✓ Teach PhP Web Programing.
- ✓ Teach Android Language.
- ✓ Teach Database and Data Structure.

🧪 Dataset Creation Experience

- ✓ Create new dataset for the Grass Cutting Robot (Private Project: Link1, YouTube Video).
- ✓ Combine 6 opensource dataset and generate new dataset for Auto driving Ship Navigation.
- ✓ Build a dataset for Natural Language Processing (Sindhi named entity recognition) [published paper: Link1].
- ✓ Collect Dataset form 8 Hospital of COVID-19 lung detection. [published paper Link 1, Link 2, YouTube Video].

🧪 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.

📑 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.

PROJECTS

S#	Project Name	Date	Project Number	Project Source
1	Research on Blockchain Sharding Consensus	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	2021/01 2024/12	U2033212	National Natural Science Foundation of China
4	Research on Intelligent Identification Method of IoT Malware Based on Android	2017/01 2019/07	61572115	National Natural Science Foundation of China

LIST OF SCI JOURNALS

S#	Tittle	Author Order	Journal Name	Date	Cited	Link
1	Blockchain and homomorphic encryption-based privacy-preserving model aggregation for medical images	1	Computerized Medical Imaging and Graphics	20-10-2022	6	Open
2	Blockchain-federated-learning and deep learning models for covid-19 detection using ct imaging.	1	IEEE Sensors Journal	15-7-2021	285	Open
3	An integration of blockchain and ai for secure data sharing and detection of CT images for the hospitals	1	Computerized Medical Imaging and Graphics	01-1-2021	90	Open

4	An online semantic-enhanced graphical model for evolving short text stream clustering	4	IEEE Transactions on Cybernetics	30-9-2021	6	Open
5	Secure large-scale E-voting system based on blockchain contract using a hybrid consensus model combined with sharding	2	ETRI Journal	01-4-2021	46	Open
6	Research on data mining of permission-induced risk for android IoT devices.	1	Applied Sciences-Basel	02-1-2019	31	Open
7	A multimodal malware detection technique for android IoTdevices using various features	1	IEEE Access	23-5-2019	120	Open
8	An efficient and provably secure ECC-based conditional privacy-preserving authentication for vehicle-to-vehicle communication in vanets	4	IEEE Transactions on Vehicular Technology	13-1-2021	53	Open
9	A federated learning approach for privacy protection in context-aware recommender systems	2	Computer Journal (Oxford Press)	30-4-2021	24	Open
10	Making assembly line in supply chain robust and secure using UHF RFID	2	Scientific Reports	10-9-2021	22	Open
11	Visual features with spatio-temporal-based fusion model for cross-dataset vehicle re-identification	5	Applied Sciences-Basel	01-8-2020	12	Open
12	Adaptive wavelet based MRI brain image de-noising	3	Frontiers in Neuroscience	22-8-2020	27	Open
13	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	10	Open
14	Efficient and deep vehicle re-identification using multi-level feature extraction	6	Applied Sciences-Basel	27-3-2019	24	Open
15	An adaptive multi-layer botnet detection technique using machine learning classifiers	3	Applied Sciences-Basel	11-06-2019	126	Open
16	Context-aware bidirectional neural model for sindhi named entity recognition	4	Applied Sciences-Basel	28-9-2021	1	Open
17	Trends in vehicle re-identification past, present, and future: a comprehensive review	5	Mathematics	27-11-2021	28	Open
18	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	01-6-2022	39	Open
19	Robust mobile robot navigation in cluttered environments based on hybrid adaptive neuro-fuzzy inference and sensor fusion	6	Journal of King Saud University - Computer and Information Sciences	03-9-2022	6	Open
20	MCNN: a multi-level CNN model for the classification of brain tumors in IoT-healthcare system	3	Journal of Ambient Intelligence and Humanized Computing	30-7-2022	5	Open
21	Probabilistic approach to covid-19 data analysis and forecasting future outbreaks Using a Multi-Layer Perceptron Neural Network	4	Diagnostics	12-10-2022	5	Open
22	Detecting Addressee Using Facial and Audio Features in Mixed Human-Human and Human-Robot Settings	9	IEEE Systems Man and Cybernetics Magazine	12-1-2022	-	Open

23	Phased array antenna diagnosis from amplitude-only data using parallel deep learning models	5	Journal of Applied Remote Sensing	09-3-2023	-	Open
24	Stock market index prediction using machine learning and deep learning techniques	6	Intelligent automation & soft computing	24-2-2023	-	Open
25	View-aware attribute-guided network for vehicle re-identification	3	Multimedia Systems	12-3-2023	-	Open
26	Bio-inspired circular polarized UHF RFID tag design using characteristic mode analysis	2	IEEE Sensors Journal	26-3-2023	-	Open
27	A Context-enhanced Dirichlet Model for Online Clustering in Short Text Streams	3	Expert Systems With Applications	23-4-2023	-	Open
28	LSS: A locality-based structure system to evaluate the spreader's importance in social complex networks	6	Expert Systems With Applications	29-4-2023	-	Open
29	Online Semi-supervised Classification on Multi-label Evolving High-Dimensional Text Streams	3	IEEE Transactions on Systems, Man, and Cybernetics	5-6-2023	-	Open
30	Responsible Recommendation Services with Blockchain Empowered Asynchronous Federated Learning	4	Transactions on Intelligent Systems and Technology		-	
31	Application of no-light fault prediction of PON based on deep learning method	4	Computer Communications	9-6-2023	-	Open
32	Nature-Inspired spider web shaped uhf rfid reader antenna for iot and healthcare		Scientific Reports			

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 PATENTS

S#	Tittle	Author Order	Patent Number	Date	Country
1	Blockchain based multi agent Heterogenous federated learning	1	202310444452.8	24-04-2023	China
2	Blockchain-Enhanced Cyclic Distillation-guided Channel Decoupling for Personalized Federated Learning	1	-	-	China
3	Autonomous Navigation and Obstacle Avoidance System Based on Deep Learning	1	202310431723.6	21-04-2023	China
4	Trusted tracking system based on multi-layer blockchain	2	202310466900.4	27-04-2023	China
5	Context-enhanced dirichlet model for online clustering in short text streams	1	202211504585.1	20-11-2022	China
6	RFID tag design with platform tolerant features using multi-resonant surfaces	1	202211388226.4	15-10-2022	China
7	A method for ranking the importance of high-order structures in high-order networks	2	2022114545198	21-11-2022	China

| 8 | A deep learning framework for addressee detection using audio and facial inputs | 9 | 202211019716.7 | 01-11-2022 | China |
| 9 | A potential-based method for identifying influential nodes in complex social networks | 3 | 202211544190.4 | 04-12-2022 | China |

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	169	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	40	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	69	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	28	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	25	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	12	Open
6	Probabilistic time context framework for big data collaborative recommendation	4	International Conference on Computing and Artificial Intelligence (ICCAI 2018)	12-03-2018	6	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	69	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	71	Open
10	A hybrid technique to detect botnets, based on p2p traffic similarity	2	2019 Cybersecurity and Cyberforensics Conference (CCC)	07-05-2019	29	Open
11	An improved convolutional neural network model for intrusion detection in networks	4	2019 Cybersecurity and Cyberforensics Conference (CCC)	07-05-2019	99	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	27	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	6	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
18	Intelligent collaborative control of multi-source heterogeneous data streams for low-power IoT: a flow machine learning approach	2	The 23rd International Conference on Algorithms and Architectures for Parallel Processing (2023)	01-08-2023		

PERSONAL INFORMATION

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

References

- **Prof. Dr. Riaz Ullah Khan**
  Director of Yangzi Delta River Cloud Computing Center, University of Electronic Science and Technology of China.
  Email: riaz@uestc.edu.cn

- **Prof. Dr. Wang Wenyong** (Postdoc Supervisor)
  Director, Big Data Research Center, University of Electronic Science and Technology of China.
  Email: wangwy@uestc.edu.cn
- **Prof. Dr. Zakria**
  Data Mining Lab, Big Data Research Center, IBA Sukkur Pakistan.
  Email: zakria.uestc@hotmail.com
- **Dr. Salah Ud Din**
  Department of Computer Science, COMSATS University, Abbottabad Campus, Pakistan.
  Email: salahuddin@cuiatd.edu.pk