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ACADEMIC EXPERIENCE

Associate Professor: Marshall University

Department of Computer Sciences and Electrical Engineering

Assistant Professor: Marshall University

Department of Computer Sciences and Electrical Engineering

Instructor: Marshall University

Department of Computer Sciences and Electrical Engineering

Postdoctoral Fellow: Clemson University

Department of Electrical and Computer Engineering

Aug 2023 - Present

Huntington WV, USA

Aug 2017 - May 2023

Huntington WV, USA

Jan 2017 - May 2017

Huntington WV, USA

May 2016 - Dec 2016

Clemson SC, USA

EDUCATION

Ph.D. in Computer Science

University of Oklahoma

May 2016

Norman OK, USA

M.S. in Computer Science

University of Texas at San Antonio

May 2011

San Antonio TX, USA

B.S. in Mathematics

Abant Izzet Baysal University

Aug 2006

Bolu, Turkey

HONORS

Weisberg Service Award

College of Engineering and Computer Sciences, Marshall University

2021 - 2022

Distinguished Artists and Scholars Junior Category Award

Marshall University

2020 - 2021

Weisberg Academy of Distinguished Teachers Award

College of Engineering and Computer Sciences, Marshall University

2020 - 2021

Outstanding Service Award

IEEE/ACM IoTDI

2021

Nomination for Pickens Queen Teaching Award

Marshall University

2018, 2021

Outstanding Ph.D. Student in Computer Science

University of Oklahoma

2015 - 2016

Study Abroad Fellowship for Higher Education

Turkish Ministry of National Education

2007 - 2016

Graduation as High Honor Student

Abant Izzet Baysal University

2006

RESEARCH INTEREST

Image Recognition: *Identify and classify objects and scenes in images and videos to solve various problems such as drone safety and structure inspections.*

Advanced Learning Technologies: *Investigate usage of high-tech products such as Virtual and Augmented Reality based applications with their effects in learning for K-12 and higher education.*

Data Mining: *Using sentiment analysis tools to understand the user behaviors for various applications like shopping habits and chain effects.*

Resource Allocation: *Determine scheduling models and allocations policies in Cloud and Fog Computing,*

IoT, and Networks with their applicable cases such as Vehicular Networks and Crowdsourcing.

Smart Health: *Develop and investigate IoT products and mobile applications with machine learning algorithms to make the health system more accessible and productive by helping doctors and patients.*

R&D GROUP ATTAINMENTS

Fellowship & Scholarship

- Connor Stonestreet (Undergraduate): Marshall University Creative Discovery and Research Award for Spring 2025; *Project: Automated Detection of Track Gauge Deviations Using Video and Depth Cameras with Machine Learning*
- Cade Parlato (Undergraduate): Marshall University SURE Summer Research Fellowship 2024; *Project: Calculating Aboveground Forest Biomass using Machine Learning with Image Segmentation*
- Andrew D'Arms (Undergraduate): Marshall University Creative Discovery and Research Award for Summer 2024; *Project: Timely Measuring of Earthquake Effects on Infrastructures According to Drone Sensor Fusion*
- Cade Parlato (Undergraduate): Marshall University Creative Discovery and Research Award for Spring 2024; *Project: Determining Tree Biomass in Forests using YOLOv7 Instance Segmentation*
- Josh Maddy (Undergraduate): NASA Undergraduate Research Fellowship for Spring 2023; *Project: The Metaphysical Exhibition An Exploration of Technology, the Arts, and Sciences: Expansion*
- Neil Loftus (Undergraduate): NASA Undergraduate Research Fellowship for Spring 2023; *Project: Detecting Birds with Real Time Image Processing for Drone Safety: Expansion*
- Neil Loftus (Undergraduate): NASA Undergraduate Research Fellowship 2022 - 2023; *Project: Detecting Birds with Real Time Image Processing for Drone Safety*
- Neil Loftus (Undergraduate): Marshall University Creative Discovery and Research Award for Summer 2022; *Project: The Cybersecurity Packet Control Simulator: The Effect of Visual Learning Tools on Retention of Information in Computer Science*
- Josh Maddy (Undergraduate): Marshall University Creative Discovery and Research Award for Summer 2022; *Project: The Metaphysical Exhibition an Exploration of Technology, the Arts, and Sciences*
- Josh Maddy (Undergraduate): Marshall University SURE Summer Research Fellowship 2022; *Project: Augmented Reality as an Aid for Physics Concepts*
- Neil Loftus (Undergraduate): Marshall University SURE Summer Research Fellowship 2022; *Project: The Cybersecurity Packet Control Simulator*
- Eric Dillion (Undergraduate): Marshall University Creative Discovery and Research Award for Spring 2022; *Project: Automatic Feedback System to Teach Cybersecurity Principles*
- Eric Shoemaker (Undergraduate): Marshall University Creative Discovery and Research Award for Summer 2021; *Project: Crowdsourcing based Community Infrastructure Management Application*
- Eric Shoemaker (Undergraduate): NASA Undergraduate Research Fellowship for Spring 2021; *Project: Community Infrastructure Management Application*
- Jarred Carter (Undergraduate): NASA Undergraduate Research Fellowship 2020 - 2021; *Project: Simulation for Trade-off Model of Fog-Cloud Computing for Space Network*
- William Coleman (Undergraduate): Marshall University SURE Summer Research Fellowship 2020; *Project: Enhancing STEM Education with Augmented Reality*
- James Farley (Undergraduate): NASA Undergraduate Research Fellowship for Spring 2020; *Project: Emotion Classification of Users in Social Media*
- Alex Canfield, Cameron Berry, Jeremy Giese, Logan Carpenter (Undergraduates): Marshall University Research Scholar Award for Spring 2019; *Project: Data Structure with Augmented Reality*

- James Farley (Undergraduate): Marshall University Creative Discovery and Research Award for Fall 2019; *Project: Emotion Classification of Users based on the Comments and Emojis in Social Media*
- Jarred Carter (Undergraduate): NASA Undergraduate Research Fellowship 2019 - 2020; *Project: Trade-off Model of Fog-Cloud Computing for Space Network*
- Caleb Kesler (Undergraduate): Marshall University Creative Discovery and Research Award for Summer 2019; *Project: Development of Story-Assisted Platform for Early Childhood for Coding*
- Alymbek Damir Uulu (Undergraduate): Marshall University SURE Summer Research Fellowship 2019; *Project: Profile Analysis on Cryptocurrency Investors and Social Engineering on Their Prices*
- Jared Lee Lewis (Undergraduate): Marshall University Creative Discovery and Research Award for Fall 2018; *Project: Automated IP Reputation Analyzer System with Machine Learning*
- Geanina Tambaliuc (Undergraduate): Marshall University SURE Summer Research Fellowship 2018; *Project: Automated IP Reputation Analyzer System*
- Alex Kacinari, Chris Murphy, Derek M Staley (Undergraduates): Marshall University Research Scholar Award for Spring 2018; *Project: Suturing Technique Simulation*
- Charlie Murphy, Michael B Branard, Steven D. Gunnels (Undergraduates): Marshall University Research Scholar Award for Spring 2018; *Project: Embedded Storybook Game*

Thesis and Capstone Advising

- Hwapyeong Song: PhD Advisor
- Eric Shoemaker: Master Thesis Committee Member
- Vishwanshi Joshi: Master Thesis Committee Chair
- Yucheng Li: Master Thesis Committee Member
- Govind Yatnalkar: Master Thesis Advisor
- Craig Carpenter II, David Wills, Eric Dillon, and John Cook (Capstone Advisor)
- Geanina Tambaliuc, Hwapyeong Song, and Wesly Webb (Capstone Advisor)
- Alex Canfield, Cameron Berry, Jeremy Giese, and Logan Carpenter (Capstone Advisor)
- Alex Kacinari, Chris Murphy, and Derek M Staley (Capstone Advisor)
- Charlie Murphy, Michael B Branard, and Steven D. Gunnels (Capstone Advisor)

Internship/Development

- Hwapyeong Song (Graduate): WV Department of Education Internship and Paving Academy 2020
- Neil Loftus (High School): Paving Academy 2020
- Geanina Tambaliuc (Undergraduate): WV Department of Education Internship 2019
- Anh Nguyen (Undergraduate): WV Department of Education Internship 2019
- Jake Gressang (Undergraduate): WV Department of Education Internship 2019
- Kuo Chi Fang (Graduate): WV Department of Education Internship 2018
- Ibrahim Hussein Mwinyi (Graduate): WV Department of Education Internship 2018

Publications

- High School Students: Isabella Schrader, Laina Karim, Neil Loftus, Sawyer Slack.
- Undergraduate Students: Alex Canfield, Alymbek Damir Uulu, Amelia McGinty, Andrew D'Arms, Anh Nguyen, Cade Parlato Cameron Berry, Cameron Green, Connor Stonestreet, Craig Carpenter II, Eric M. Dillon, Eric Shoemaker, Furkan Kizilay, Geanina Tambaliuc, Greg Weed, Hannah Vitalos, James Farley, Jared Lee Lewis, Jarred Carter, Jeremy Giese, John Cook, Josh Maddy, Logan Carpenter, Neil Loftus, Thomas D. Wills, William Coleman.

- Graduate Students: Eric Shoemaker, Hwapyeong Song, Govind Yatnalkar, Ibrahim Hussein Mwinyi, Kanimozhi Kalaichelavan, Kuo Chi Fang, Sreehari Sreenath.

TAUGHT COURSES AND EFFECTIVENESS

- Computer Science II - OOP Java (Spring'19 - 20, '24 - 25, Fall'19, Fall'23 - 24)
- Data Structures and Algorithms (Spring'17 - 25, Fall'17 - 24)
- Advanced Data Structures and Algorithms (Spring'17)
- Automata and Formal Languages (Fall'18)
- Database Engineering (Spring'17)
- Database Systems (Spring'17 - 18, 21 - 24)
- Cloud Computing (Fall'17 - 18, 20 - 22)
- Database Management (Spring'17 - 18)
- Cyberwarfare (Spring'20 - 22)
- Geometry (Fall'06, Spring'07)

Q1	I believe that I learned in this class.
Q2	The course was well organized.
Q3	This course challenged me intellectually.
Q4	I have become more competent in this area because of this course.
Q5	The objectives of the course were well explained.
Q6	The instructor followed his/her syllabus.
Q7	The instructor gave clear explanations to clarify concepts.
Q8	The instructor was supportive in academic situations.
Q9	The instructor showed enthusiasm when teaching.
Q10	The instructor informed students of their progress.
Q11	The instructor's use of examples helped to get points across in class.
Q12	The instructor adequately explained the grading scale.
Q13	The instructor treated me fairly.
Q14	The instructor was enthusiastic about the course material.
Q15	The instructor encouraged students to ask questions.
Q16	The instructor provided me with an effective array of challenges.
Q17	The instructor carefully answered questions raised by students.
Q18	The instructor treated students with respect.
Q19	The instructor presented material in a clear manner.
Q20	The instructor used class time well.
Q21	The instructor seemed genuinely interested in wanting me to learn.
Q22	I would recommend this instructor to other students.

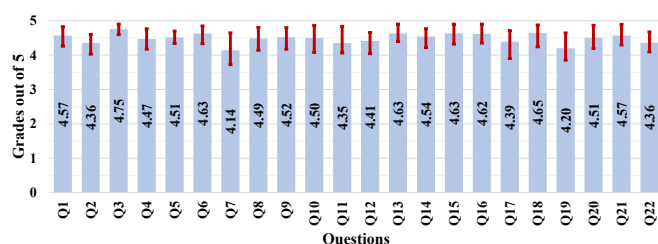


Figure 1: Each question (left table) is asked to more than 630 undergraduate and graduate students to grade from 1 to 5 in course evaluations. The figure bars show the average grades with minimum and maximum values for each question (the average is out of 5).

SERVICES

Marshall University

- Organization of Computer Science Adventure Zone Summer Camp
- Elected College Representative on the Athletic Committee
- CS Freshman Orientation
- CS Online Course Development
- CS Conference Organization Committee
- Computer Science (CS) Student Leadership Program Coordinator
- CS Representative on the College Outreach and Recruitment Committee
- CS Outreach Committee Chair
- CS Faculty Candidate Interviewing Committee
- Catalog Editing and Correction for BS and MS Programs in CS
- CS Project Room Management

Huntington WV, USA

- 2017 - Present
- 2019 - Present
- 2018 - Present
- 2018 - Present
- 2018 - Present
- 2019 - 2020
- 2019 - 2020
- 2017 - 2020
- 2017 - 2019
- 2017 - 2018
- 2017 - 2018

PROFESSIONAL ACTIVITIES

Co-Lead for Training Programs <i>Institute for Cybersecurity (ICS), Marshall University</i>	2021 - Present
Editorial Board <i>Editorial Board: Elsevier Journal of Network and Computer Applications</i>	2018 - Present
Summer Camp on Robotics and Cybersecurity for K-12 <i>Marshall University</i>	2017 - Present <i>Huntington WV, USA</i>
Reviewer <i>National Science Foundation (NSF)</i>	2023 - Present
Faculty Mentor Internship Program <i>WV Department of Education</i>	2018 - 2020 <i>Huntington WV, USA</i>
Virtual Conference Working Group Lead • 2021 ACM/IEEE Conference on Internet of Things Design and Implementation	
Publicity Co-Chair • 2017 International Conference on Networking, Architecture, and Storage • 2017 International Conference on Computer Communications and Networks	
Technical Program Committee • IEEE Global Communications Conf. • IEEE Int. Conf. on Communications • Springer Ubiquitous Networking Conf. • IEEE Wireless Communications and Networking Conf. • IEEE Int. Conf. on Communications, Network, and Satellite • IEEE 5G World Forum (WF-5G) • IEEE Int. Conf. on Internet of Things and Intelligence System • Elsevier Int. Conf. on Ambient Systems, Networks and Technologies • IEEE Int. Conf. on Fog and Edge Computing • IEEE Symp. on Signal Processing and Information Technology • IEEE Int. Conf. on Signals and Systems • IEEE/ACM Int. Symp. in Cluster, Cloud, and Grid Computing • IEEE Middle East & North Africa Communications Conf. • IEEE Int. Conf. on Wireless Networks and Mobile Communications • IEEE TENCON	
Journal Reviewer • IEEE Journal on Selected Areas in Communications • IEEE Transactions on Mobile Computing • IEEE Transactions on Parallel and Distributed Systems • IEEE Transactions on Vehicular Technology • IEEE Transactions on Industrial Electronics • IEEE Transaction on Intelligent Transportation Systems • IEEE Transactions on Sustainable Computing, • ACM Transactions on Cyber-Physical Systems • ACM Transactions on Knowledge Discovery from Data • Elsevier Journal of Network and Computer Applications • Elsevier Future Generation Computer System • MDPI Sensors • Wiley Software: Practice and Experience	
Membership • IEEE Senior Member (2022 - Present) • IEEE Member (2014 - 2021)	

VOLUNTEER ACTIVITIES

VEX IQ Robot Tournament for Middle and Elementary Schools <i>Marshall University</i>	2019 - Present <i>Huntington WV, USA</i>
Faculty adviser for IEEE Marshall University Student Chapter <i>Marshall University</i>	2022 - Present <i>Huntington WV, USA</i>
Faculty adviser for Geeks and Gadgets Club <i>Marshall University</i>	2018 - Present <i>Huntington WV, USA</i>
Coordinator and Initiator for Community Service Leadership Program <i>Marshall University</i>	2019 - 2020 <i>Huntington WV, USA[-5pt]</i>

CERTIFICATION

Responsible Conduct of Research <i>Collaborative Institutional Training Initiative Program</i>	2018 <i>Huntington WV, USA</i>
Behavioral & Social Science Research <i>Collaborative Institutional Training Initiative Program</i>	2018 <i>Huntington WV, USA</i>

Independent Improving Your Online Course (IYOC)
Quality Matters
Java SE 7
Robert Half Technology

2017
Huntington WV, USA
2016
Clemson SC, USA

GRANTS

External Funded and Under Review Grant Applications

- [16] *Automatic Assessment and Repair for Railroads. Co-PI.* ERDC, 2023. Amount: \$2M, **Funded.**
- [15] *Establishing a Cyber Security Center for Critical Infrastructure. Responsible for Training Modules.* Department of Education, 2023. Amount: Total:\$1,5M, Share: \$750K, **Funded.**
- [14] *Detecting Birds with Real Time Image Processing for Drone Safety. Mentor.* NASA West Virginia Undergraduate Research Fellowship, 2022. Amount: \$5K, **Funded.**
- [13] *Detecting Birds with Real Time Image Processing for Drone Safety: Expansion. Mentor.* NASA Undergraduate Affiliate Fellowship Program, 2022. Amount: \$1K, **Funded.**
- [12] *Experiences for Teachers on Cyber Security. Proposal Developer.* NSF/NSA GenCyber Teacher Summer Camp, 2022. Amount: \$140K, **Funded.**
- [11] *The Metaphysical Exhibition an Exploration of Technology, the Arts, and Sciences. Mentor.* NASA Undergraduate Affiliate Fellowship Program, 2022. Amount: \$1K, **Funded.**
- [10] *Crowdsourcing Infrastructure Management System. Mentor.* NASA Undergraduate Affiliate Fellowship Program, 2021. Amount: \$1K, **Funded.**
- [9] *Community Infrastructure Management Application. Mentor.* NASA Undergraduate Affiliate Fellowship Program, 2020. Amount: \$1K, **Funded.**
- [8] *Development of the Pavement Preservation and Rehabilitation Academy. Co-PI.* Wirtgen Group - John Deere Company, 2020. Amount: \$40K, **Funded.**
- [7] *Scholarships and a Project-based Work Studio to Support Undergraduate Student Graduation and Entry into Computer Science, Engineering, and Safety Technology Careers. Co-PI.* NSF, 2020. Amount: \$1M, **Funded.**
- [6] *Trade-off Model of Fog-Cloud Computing for Space Network. Mentor.* NASA West Virginia Undergraduate Research Fellowship, 2020. Amount: \$5K, **Funded.**
- [5] *Emotion Classification of Users in Social Media. Mentor.* NASA Undergraduate Affiliate Fellowship Program, 2019. Amount: \$1K, **Funded.**
- [4] *Experiences for Teachers on Cyber Security. PI.* NSF/NSA GenCyber Teacher Summer Camp, 2019. Amount: \$73K, **Funded.**
- [3] *Trade-off Model of Fog-Cloud Computing for Space Network. Mentor.* NASA West Virginia Undergraduate Research Fellowship, 2019. Amount: \$5K, **Funded.**
- [2] *WV Faculty Mentor Internship Program - Calendar and Special Education Applications. Co-PI.* West Virginia Department of Education, 2019. Amount: \$85K, **Funded.**
- [1] *WV Faculty Mentor Internship Program - Complain Management Application and Security of Applications. Co-PI.* West Virginia Department of Education, 2019. Amount: \$79K, **Funded.**

Internal Funded Grant Applications

- [31] *Automated Detection of Track Gauge Deviations Using Video and Depth Cameras with Machine Learning. Mentor.* Undergraduate Spring Creative Discovery Scholar and Undergraduate Research Scholar Awards, Marshall University, 2024. Amount: \$1,750.00, **Funded.**
- [30] *Calculating Aboveground Forest Biomass using Machine Learning with Image Segmentation. Mentor.* Undergraduate Summer Research Experience (SURE), Marshall University, 2024. Amount: \$4K, **Funded.**

- [29] *Determining Tree Biomass in Forests using YOLOv7 Instance Segmentation.* **Mentor.** Undergraduate Spring Creative Discovery Scholar and Undergraduate Research Scholar Awards, Marshall University, 2024. Amount: \$1,750.00, **Funded.**
- [28] *Enhancing Programming Education through Artificial Intelligence-Driven Tools.* **PI.** Faculty Summer Research, Marshall University, 2024. Amount: \$2K, **Funded.**
- [27] *Quinlan Endowment Faculty Travel.* **PI.** Quinlan Endowment Faculty Travel, Marshall University, 2024. Amount: \$500.00, **Funded.**
- [26] *Timely Measuring of Earthquake Effects on Infrastructures According to Drone Sensor Fusion.* **Mentor.** Undergraduate Summer Research and Creative Discovery, Marshall University, 2024. Amount: \$5K, **Funded.**
- [25] *Augmented Reality as an Aid for Physics Concepts.* **Mentor.** Undergraduate Summer Research Experience (SURE), Marshall University, 2022. Amount: \$4K, **Funded.**
- [24] *Auto Feedback System based on Artificial Intelligence for Cybersecurity Learners.* **PI.** Faculty Summer Research, Marshall University, 2022. Amount: \$2K, **Funded.**
- [23] *Automatic Feedback System to Teach Cybersecurity Principles.* **Mentor.** Undergraduate Fall Creative Discovery Scholar and Undergraduate Research Scholar Awards, Marshall University, 2022. Amount: \$1,750.00, **Funded.**
- [22] *Marshall University Presentation Center: Developing A Campus-Wide Resource to Enhance Communication Fluency Across the Curriculum.* **Co-PI.** Hedrick Program Grant for Teaching Innovation, Marshall University, 2022. Amount: \$5K, **Funded.**
- [21] *The Cybersecurity Packet Control Simulator.* **Mentor.** Undergraduate Summer Research Experience (SURE), Marshall University, 2022. Amount: \$4K, **Funded.**
- [20] *The Cybersecurity Packet Control Simulator: The Effect of Visual Learning Tools on Retention of Information in Computer Science.* **Mentor.** Undergraduate Summer Research and Creative Discovery, Marshall University, 2022. Amount: \$5K, **Funded.**
- [19] *The Metaphysical Exhibition an Exploration of Technology, the Arts, and Sciences.* **Mentor.** Undergraduate Summer Research and Creative Discovery, Marshall University, 2022. Amount: \$5K, **Funded.**
- [18] *Crowdsourcing Infrastructure Management System.* **Mentor.** Undergraduate Summer Research and Creative Discovery, Marshall University, 2021. Amount: \$5K, **Funded.**
- [17] *Enhancing STEM Education with Augmented Reality.* **Mentor.** Undergraduate Summer Research Experience (SURE), Marshall University, 2020. Amount: \$4K, **Funded.**
- [16] *A Smart Therapy Tool for Feeding and Speech Disorder Detection.* **PI.** John Marshall University Summer Scholars Awards, Marshall University, 2019. Amount: \$6.5K, **Funded.**
- [15] *Artificial Intelligence and Integrated Fog-Cloud Computing based Matching Algorithm for Carpooling.* **PI.** Faculty Summer Research, Marshall University, 2019. Amount: \$2K, **Funded.**
- [14] *Augmented Reality based Application for Data Structure.* **Mentor.** Undergraduate Fall Research Scholar Awards, Marshall University, 2019. Amount: \$250.00, **Funded.**
- [13] *Development of Story-Assisted Platform for Early Childhood for Coding.* **Mentor.** Undergraduate Summer Research and Creative Discovery, Marshall University, 2019. Amount: \$5K, **Funded.**
- [12] *Emotion Classification of Users based on the Comments and Emojis in Social Media.* **Mentor.** Undergraduate Fall Creative Discovery Scholar and Undergraduate Research Scholar Awards, Marshall University, 2019. Amount: \$1,750.00, **Funded.**
- [11] *Profile Analysis on Cryptocurrency Investors and Social Engineering on their Prices.* **Mentor.** Undergraduate Summer Research Experience (SURE), Marshall University, 2019. Amount: \$4K, **Funded.**
- [10] *Quinlan Endowment Faculty Travel.* **PI.** Quinlan Endowment Faculty Travel, Marshall University, 2019. Amount: \$500.00, **Funded.**
- [9] *Student Research and Innovation Center.* **Co-PI.** Cross-disciplinary Research Facilitation Grant, Marshall University, 2019. Amount: \$500.00, **Funded.**
- [8] *Automated IP Reputation Analyzer System.* **Mentor.** Undergraduate Summer Research Experience (SURE), Marshall University, 2018. Amount: \$4K, **Funded.**

- [7] *Automated IP Reputation Analyzer System*. **Mentor**. Undergraduate Fall Creative Discovery Scholar and Undergraduate Research Scholar Awards, Marshall University, 2018. Amount: \$1,750.00, **Funded**.
- [6] *Game Embedded Storybook*. **Mentor**. Undergraduate Spring Research Scholar Awards, Marshall University, 2018. Amount: \$175.00, **Funded**.
- [5] *Placement of Electric Vehicle Charging Sections and Traffic Management*. **PI**. Faculty Summer Research, Marshall University, 2018. Amount: \$2K, **Funded**.
- [4] *Quinlan Endowment Faculty Travel*. **PI**. Quinlan Endowment Faculty Travel, Marshall University, 2018. Amount: \$400.00, **Funded**.
- [3] *Suturing Technique Simulation*. **Mentor**. Undergraduate Spring Research Scholar Awards, Marshall University, 2018. Amount: \$175.00, **Funded**.
- [2] *Research Initiation and Developemnt*. **PI**. Marshall University, 2017. Amount: \$100,000.00, **Funded**.
- [1] *Self-dynamic Data Center Management to Optimize Search Speed for Media Type Files*. **PI**. Faculty Summer Research, Marshall University, 2017. Amount: \$2,000.00, **Funded**.

PUBLICATIONS

Patents and Intellectual Property

- [1] *Oral Therapy Tool, System, and Related Methods*. Patent Appl. Serial No. 62/947,264, Regular, United States. (Submitted: November 2019, Application: December 2019, Updated: October 2022, Allowed: January 2023, Granted: August 2023 – 11,712,366).

Books

- [1] **Husnu S. Narman** and Mohammed Atiquzzaman. *Carrier Assignment and Packet Scheduling in LTE-A and Wi-Fi*. Dissertation as a Book. LAP LAMBERT Academic Publishing, May 2016, p. 160. ISBN: 9783659891977. URL: <https://www.amazon.com/Carrier-Assignment-Packet-Scheduling-Wi-Fi/dp/3659891975>.

Journals

- [15] Furkan Kizilay, Mina R. Narman, Hwapyeong Song⁺, **Husnu S. Narman**, Cumhur Cosgun, and Ammar Alzarrad. “Evaluating Fine Tuned Deep Learning Models for Real-Time Earthquake Damage Assessment with Drone-Based Images”. In: *AI in Civil Engineering* (2024).
- [14] Neil Loftus* and **Husnu S. Narman**. “Use of Machine Learning in Interactive Cybersecurity and Network Education”. In: *Sensors* 23.6 (2023). ISSN: 1424-8220.
- [13] Amrit Pal, Abishi Chowdhury, Satakshi, **Husnu S. Narman**, Arkabandhu Chowdhury, and Manish Kumar. “Random Partition based Adaptive Distributed Kernelized SVM for Big Data”. In: *IEEE Access* (2022).
- [12] Arnob Paul, Md. Hasanul Islam, Md. Shohrab Hossain, and **Husnu S. Narman**. “A novel zone walking protection for secure DNS Server”. In: *International Journal of Interdisciplinary Telecommunications and Networking* (2022).
- [11] **Husnu S. Narman**, Haroon Malik, and Govind Yasnalkar⁺. “An Enhanced Ride Sharing Model Based on Human Characteristics, Machine Learning Recommender System, and User Threshold Time”. In: *Springer Journal of Ambient Intelligence and Humanized Computing* (2021). **Invited**.
- [10] Jinwei Liu, Haiying Shen, Hongmei Chi, **Husnu S. Narman**, Yongyi Yang, Long Cheng, and Wingyan Chung. “A Low-Cost Multi-Failure Resilient Replication Scheme with Data Correlation for High Data Availability in Cloud Storage”. In: *IEEE/ACM Transaction on Networking* (2020).
- [9] Abishi Chowdhury, Shital A. Raut, and **Husnu S. Narman**. “DA-DRLS: Drift adaptive deep reinforcement learning based scheduling for IoT resource management”. In: *Journal of Network and Computer Applications* 138 (May 2019), pp. 51–65.

- [8] Ankur Sarker, Haiying Shen, M. Rahman, M. Chowdhury, K. Dey, F. Li, Y. Wang, and **Husnu S. Narman**. “A Review of Sensing and Communication, Human Factors, and Controller Aspects for Information-Aware Connected and Automated Vehicles”. In: *IEEE Transactions on Intelligent Transportation Systems* (March 2019).
- [7] Kuo-Chi Fang⁺, **Husnu S. Narman**, Ibrahim Hussein Mwinyi⁺, and Wook-Sung Yoo. “PPHA-Popularity Prediction Based High Data Availability for Multimedia Data Center”. In: *International Journal of Interdisciplinary Telecommunications and Networking* 11.1 (January 2019), pp. 17–29.
- [6] Jinwei Liu, Haiying Shen, **Husnu S. Narman**, Z. Lin, and Z. Li. “Popularity-aware Multi-failure Resilient and Cost-effective Replication for High Data Durability in Cloud Storage”. In: *IEEE Transactions on Parallel and Distributed Systems* (October 2018).
- [5] Jinwei Liu, Haiying Shen, **Husnu S. Narman**, Wingyan Chung, and Zongfang Lin. “A Survey of Mobile Crowdsensing Techniques: A Critical Component for The Internet of Things”. In: *ACM Transactions on Cyber-Physical Systems* 2.3 (June 2018).
- [4] Jinwei Liu, Haiying Shen, L. Yu, **Husnu S. Narman**, J. Zhai, J. O. Hallstrom, and Y. He. “Characterizing Data Deliverability of Greedy Routing in Wireless Sensor Networks”. In: *IEEE Transactions on Mobile Computing* 17.3 (March 2018), pp. 543–559.
- [3] **Husnu S. Narman**, Md.Shohrab Hossain, Mohammed Atiquzzaman, and Haiying Shen. “Scheduling Internet of Things Applications in Cloud Computing”. In: *Annals of Telecommunications* (February 2017).
- [2] **Husnu S. Narman**, Mohammed Atiquzzaman, Mehdi Rahmani-andebili, and Haiying Shen. “Joint and Selective Component Carrier Assignment in LTE-A”. In: *Computer Networks* (September 2016).
- [1] **Husnu S. Narman**, Md.Shohrab Hossain, and Mohammed Atiquzzaman. “Management and Analysis of Multi Class Traffic in Single and Multi-band Systems”. In: *Wireless Personal Communications* 83 (July 2015).

Conferences

- [50] Andrew D’Arms*, Hwapyeong Song⁺, **Husnu S. Narman**, Nevzat C. Yurtcu, Pingping Zhu, and Ammar Alzarrad. “Automated Railway Crack Detection Using Machine Learning: Analysis of Deep Learning Approaches”. In: *IEEE Annual Information Technology, Electronics & Mobile Communication Conference (IEEE IEMCON)*. **Best Paper and Best Presentation Awards**. Berkley, CA, October 2024.
- [49] Cade Parlato*, Neil Loftus*, Sam McGrath*, **Husnu S. Narman**, and Rick Gage. “Remote Estimation of Above Ground Forest Biomass Using LiDAR and Drone Imagery”. In: *IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON)*. New York, NY, October 2024.
- [48] Connor Stonestreets*, Hwapyeong Song⁺, **Husnu S. Narman**, Pingping Zhu, and Ammar Alzarrad. “Automated Detection of Track Gauge Deviations Using Video and Depth Cameras With Machine Learning”. In: *IEEE Annual Information Technology, Electronics & Mobile Communication Conference (IEEE IEMCON)*. Berkley, CA, October 2024.
- [47] Eric Zabala* and **Husnu S. Narman**. “Development and Evaluation of an AI-Enhanced Python Programming Education System”. In: *IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON)*. New York, NY, October 2024.
- [46] Josh Maddy*, Neil Loftus*, Hannah Vitalos*, Haleigh Zerkle*, and **Husnu S. Narman**. “Space Exploration Museum with Virtual Reality”. In: *IEEE Integrated STEM Education Conference (IEEE ISEC)*. Princeton, New Jersey, March 2024.
- [45] Neil Loftus*, Cade Parlato*, Amelia McGinty*, Furkan Kizilay, and **Husnu S. Narman**. “A Feasibility Study of Real-Time Image Processing Techniques for Small Flying Object Detection in Drones”. In: *IEEE International Conference on Consumer Electronics (ICCE)*. Las Vegas, NV, January 2024.
- [44] Eric Shoemaker⁺, Haroon Malik, **Husnu S. Narman**, and Jamil Chaudri. “Explaining the Unseen: Leveraging XAI to Enhance the Trustworthiness of Black-Box Models in Performance Testing”. In: *In-*

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