**Husnu S. Narman**

: http://hsnarman.github.io
: http://www.linkedin.com/in/husnunarman
: https://bit.ly/2KQCc1x

narman@marshall.edu
Office : (304) 696-5829

## ACADEMIC EXPERIENCE

**Associate Professor: Marshall University** — **Aug 2023 - Present**
*Department of Computer Sciences and Electrical Engineering* — *Huntington WV, USA*

**Assistant Professor: Marshall University** — **Aug 2017 - May 2023**
*Department of Computer Sciences and Electrical Engineering* — *Huntington WV, USA*

**Instructor: Marshall University** — **Jan 2017 - May 2017**
*Department of Computer Sciences and Electrical Engineering* — *Huntington WV, USA*

**Postdoctoral Fellow: Clemson University** — **May 2016 - Dec 2016**
*Department of Electrical and Computer Engineering* — *Clemson SC, USA*

## EDUCATION

**Ph.D. in Computer Science** — **May 2016**
*University of Oklahoma* — *Norman OK, USA*

**M.S. in Computer Science** — **May 2011**
*University of Texas at San Antonio* — *San Antonio TX, USA*

**B.S. in Mathematics** — **Aug 2006**
*Abant Izzet Baysal University* — *Bolu, Turkey*

## HONORS

**Weisberg Faculty Research Award for Senior Faculty**
*College of Engineering and Computer Sciences, Marshall University* — *2024 - 2025*

**Mentorship Excellence Award**
*NSF S-STEM Project Work Studio, Marshall University* — *2024 - 2025*

**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**

- Brandon Redden (Undergraduate): Marshall University Research and Creative Discovery Award for Summer 2025; *Project: Early Detection of Forest Fires Using Machine Learning*
- Connor Stonestreet (Undergraduate): Marshall University Research and Creative Discovery 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 Research and Creative Discovery Award for Summer 2024; *Project: Timely Measuring of Earthquake Effects on Infrastructures According to Drone Sensor Fusion*
- Cade Parlato (Undergraduate): Marshall University Research and Creative Discovery 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 Research and Creative Discovery 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 Research and Creative Discovery 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 Research and Creative Discovery Award for Spring 2022; *Project: Automatic Feedback System to Teach Cybersecurity Principles*
- Eric Shoemaker (Undergraduate): Marshall University Research and Creative Discovery 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 and Creative Discovery Award for Spring 2019; *Project: Data Structure with Augmented Reality*
- James Farley (Undergraduate): Marshall University Research and Creative Discovery 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 Research and Creative Discovery 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 Research and Creative Discovery 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
- Raghad Alhusari: Master Thesis Committee Member
- 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, Aayush Damai, 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: Abdullah Jawad, Alexander Lambert, Eric Shoemaker, Hwapyeong Song, Govind Yatnalkar, Ibrahim Hussein Mwinyi, Kanimozhi Kalaichelavan, Kuo Chi Fang, Noah Quesenberry, Sreehari Sreenath.

## TAUGHT COURSES AND EFFECTIVENESS

- Computer Science II - OOP Java (Spring'19 - 20, '24 - 25, Fall'19, '23 - 25)
- Data Structures and Algorithms (Spring'17 - 25, Fall'17 - 25)
- Advanced Data Structures and Algorithms (Spring'17)
- Automata and Formal Languages (Fall'18)
- Database Engineering (Spring'17)
- Advanced Database Systems (Spring'17 - 18, 21 - 25)
- 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. |

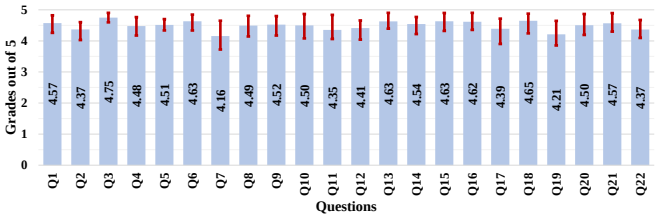


Figure 1: Each question in the left table was rated by over 660 undergraduate and graduate students on a scale from 1 to 5 during course evaluations. The figure's bars display the average scores across all semesters, along with the minimum and maximum semester-based averages for each question. (All ratings are based on a 5-point scale.)

## SERVICES

**Marshall University** — **Huntington WV, USA**

- Organization of Computer Science Adventure Zone Summer Camp — 2017 - Present
- Elected College Representative on the Athletic Committee — 2019 - Present
- Faculty Search Committee Member and Chair — 2023 - Present
- CS Freshman Orientation — 2018 - Present
- CS Online Course Development — 2018 - Present
- CS Conference Organization Committee — 2018 - Present
- Computer Science (CS) Student Leadership Program Coordinator — 2019 - 2020
- CS Representative on the College Outreach and Recruitment Committee — 2019 - 2020
- CS Outreach Committee Chair — 2017 - 2020
- CS Faculty Candidate Interviewing Committee — 2017 - 2019
- Catalog Editing and Correction for BS and MS Programs in CS — 2017 - 2018
- CS Project Room Management — 2017 - 2018

## PROFESSIONAL ACTIVITIES

**Co-Lead for Training Programs** — **2021 - Present**

*Institute for Cybersecurity (ICS), Marshall University*

**Editorial Board** **2018 - Present**
*Editorial Board: Elsevier Journal of Network and Computer Applications*
**Summer Camp on Robotics and Cybersecurity for K-12** **2017 - Present**
*Marshall University* *Huntington WV, USA*
**Reviewer** **2023 - Present**
*National Science Foundation (NSF)*
**Faculty Mentor Internship Program** **2018 - 2020**
*WV Department of Education* *Huntington WV, USA*
**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** **2019 - Present**
*Marshall University* *Huntington WV, USA*
**Faculty adviser for IEEE Marshall University Student Chapter** **2022 - Present**
*Marshall University* *Huntington WV, USA*
**Faculty adviser for IEEE Women in Engineering** **2024 - Present**
*Marshall University* *Huntington WV, USA*
**Faculty adviser for Vex Robotics Club** **2024 - Present**
*Marshall University* *Huntington WV, USA*
**Faculty adviser for Marshall University Technology Association** **2018 - Present**
*Marshall University* *Huntington WV, USA*
**Coordinator and Initiator for Community Service Leadership Program** **2019 - 2020**
*Marshall University* *Huntington WV, USA*

## CERTIFICATION

**Responsible Conduct of Research** **2018**
*Collaborative Institutional Training Initiative Program* *Huntington WV, USA*
**Behavioral & Social Science Research** **2018**

*Collaborative Institutional Training Initiative Program* — *Huntington WV, USA*
**Independent Improving Your Online Course (IYOC)** — **2017**
*Quality Matters* — *Huntington WV, USA*
**Java SE 7** — **2016**
*Robert Half Technology* — *Clemson SC, USA*

## GRANTS

### External Funded Grants: Total Amount:$4,665,550

[18] *REU Site: Undergraduate Research in Data Analytics (URDA).* **Senior Personnel**. NSF, 2025. Amount: $388K, **Funded**.

[17] *Automatic Assessment and Repair for Railroads.* **Co-PI**. ERDC, 2024. Amount: $2M, **Funded**.

[16] *Establishing a Cyber Security Center for Critical Infrastructure.* **Responsible for Training Modules**. Department of Education, 2023. Amount: Total:$1,5M, Share: $750K, **Funded**.

[15] *Detecting Birds with Real Time Image Processing for Drone Safety.* **Mentor**. NASA West Virginia Undergraduate Research Fellowship, 2022. Amount: $5K, **Funded**.

[14] *Detecting Birds with Real Time Image Processing for Drone Safety: Expansion.* **Mentor**. NASA Undergraduate Affiliate Fellowship Program, 2022. Amount: $1K, **Funded**.

[13] *Experiences for Teachers on Cyber Security.* **Proposal Developer**. NSF/NSA GenCyber Teacher Summer Camp, 2022. Amount: $140K, **Funded**.

[12] *The Metaphysical Exhibition an Exploration of Technology, the Arts, and Sciences.* **Mentor**. NASA Undergraduate Affiliate Fellowship Program, 2022. Amount: $1K, **Funded**.

[11] *VEX IQ Workshops for Students and Staff of Playmates.* **Responsible for Summer Workshops**. Department of Education, 2022. Amount: Total:$1,5M, Share: $40K, **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] *Adventure Zone Teacher Academy on Cybersecurity.* **PI**. NSF/NSA GenCyber Teacher Summer Camp, 2019. Amount: $73K, **Funded**.

[4] *Emotion Classification of Users in Social Media.* **Mentor**. NASA Undergraduate Affiliate Fellowship Program, 2019. Amount: $1K, **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 Grants: Total Amount: $186,850

[32] *Early Detection of Forest Fires Using Machine Learning.* **Mentor**. Undergraduate Summer Research and Creative Discovery, Marshall University, 2025. Amount: $5K, **Funded**.

[31] *Automated Detection of Track Gauge Deviations Using Video and Depth Cameras with Machine Learning*. **Mentor**. Undergraduate Spring Research and Creative Discovery, 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] *Enhancing Programming Education through Artificial Intelligence-Driven Tools*. **PI**. Faculty Summer Research, Marshall University, 2024. Amount: $2K, **Funded**.

[28] *Quinlan Endowment Faculty Travel*. **PI**. Quinlan Endowment Faculty Travel, Marshall University, 2024. Amount: $500.00, **Funded**.

[27] *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**.

[26] *Determining Tree Biomass in Forests using YOLOv7 Instance Segmentation*. **Mentor**. Undergraduate Spring Research and Creative Discovery, Marshall University, 2023. Amount: $1,750.00, **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 Research and Creative Discovery, 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 Research and Creative Discovery, 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 Research and Creative Discovery, 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

±: High School Students, ∗: Undergraduate Students, +: Graduate Students.

### 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 Yatnalkar+. "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**

[57] Advay Chandramouli*, Hwapyeong Song$^{+}$, Mingyan Liu*, Aayush Damai*, **Husnu S. Narman**, and Ammar Alzarrad. "Deep Learning Approaches for Railroad Infrastructure Monitoring: Comparing YOLO and Vision Transformers for Defect Detection". In: *IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON)*. New York, NY, October 2025.

[56] Mingyan Liu*, Van Trung Le*, Hwapyeong Song$^{+}$, Advay Chandramouli*, **Husnu S. Narman**, and Ammar Alzarrad. "Comparing Object Detection, Instance Segmentation, and Semantic Segmentation for Automated Vegetation Detection in Railroad Systems". In: *IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (IEEE UEMCON)*. **Best Presentation Awards**. New York, NY, October 2025.

[55] Ammar Alzarrad, Shahid Ali$^{+}$, Sudipta Chowdhury, and **Husnu S. Narman**. "Reducing Gun-Related Incidents on Construction Sites: An AI-Driven Approach for Automated Detection of People, Tools, and Firearms". In: *ASCE International Conference on Computing in Civil Engineering (ASCE I3CE)*. New Orleans, LA, May 2025.

[54] Aayush Damai*, Hwapyeong Song$^{+}$, **Husnu S. Narman**, Alexander Lambert$^{+}$, and Ammar Alzarrad. "Enhancing Railway Safety: A Machine Learning Approach for Automated Detection of Missing Track Bolts". In: *ASCE International Conference on Computing in Civil Engineering (ASCE I3CE)*. New Orleans, LA, May 2025.

[53] Tina Cartwright, Julie Snyder-Yuly, Wook-Sung Yoo, and **Husnu S. Narman**. "Mindset Matters: Exploring Grit and Attitudes in Engineering and CS Undergrads in an NSF S-STEM funded program". In: *ASEE North Central Section Conference*. Huntington, WV, March 2025.

[52] Abdullah Jawad$^{+}$, Noah Quesenberry$^{+}$, **Husnu S. Narman**, and Paulus Wahjudi. "Enhancing Workforce Cyber Resilience: Bridging the Gap in ICS Protection". In: *IEEE Integrated STEM Education Conference (IEEE ISEC)*. Princeton, NJ, March 2025.

[51] Dylan Lester*, James Gao$^{+}$, Samuel Sutphin*, PingPing Zhu, and **Husnu S. Narman**. "A YOLO-Based Semi-Automated Labeling Approach to Improve Fault Detection Efficiency in Railroad Videos". In: *ASEE North Central Section Conference*. Huntington, WV, March 2025.

[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, NJ, 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: *International Conference on Future Networks and Communications (FNC)*. Halifax, Nova Scotia, August 2023.

[43] Shawon Kumar Saha, Rafidul Islam Sarker, Md Shohrab Hossain, and **Husnu S. Narman**. "Android Malware Detection Using Incremental Learning Approach". In: *IEEE International Black Sea Conference on Communications and Networking (IEEE BLACKSEACOM)*. Istanbul, Turkey, July 2023.

[42] Josh Maddy*, Eric M. Dillon*, and **Husnu S. Narman**. "Adapting Cybersecurity Teacher Training Camp to Virtual Learning". In: *IEEE Integrated STEM Education Conference (IEEE ISEC)*. **Best Paper Award**. Laurel, MD, March 2023.

[41] Josh Maddy* and **Husnu S. Narman**. "Virtual Reality Museum Application for the Arts". In: *IEEE Integrated STEM Education Conference (IEEE ISEC)*. Laurel, MD, March 2023.

[40] Shahriar Hassan, Md. Asif Muztaba1, Shohrab Hossain, and **Husnu S. Narman**. "A Hybrid Encryption Technique based on DNA Cryptography and Steganography". In: *IEEE Information Technology, Electronics and Mobile Communication Conference (IEEE IEMCON)*. **Best Presentation Award**. Virtual, October 2022.

[39] Eric M. Dillon*, Craig Carpenter II*, John Cook*, Thomas D. Wills*, and **Husnu S. Narman**. "A Machine Learning-Based Automatic Feedback System to Teach Cybersecurity Principles to K-12 and College Students". In: *IEEE Global Humanitarian Technology Conference (GHTC)*. Virtual, September 2022.

[38] Neil Loftus*, Cameron Green*, and **Husnu S. Narman**. "The Cybersecurity Packet Control Simulator: CSPCS". In: *IEEE Global Humanitarian Technology Conference (GHTC)*. Virtual, September 2022.

[37] Kazi Kader, Md. Tareque Tahsin, Md. Shohrab Hossain, and **Husnu S. Narman**. "Ransomware Detection Using Binary Classification". In: *IEEE Cyber Science and Technology Congress (IEEE CyberSciTech)*. Virtual, October 2021.

[36] Md. Mahbubur Rahman, Md. Shohrab Hossain, Mohammad Mahfuzul Islam, and **Husnu S. Narman**. "An Energy Efficient Gravitational Model for Tree Based Routing in Wireless Sensor Networks". In: *IEEE Information Technology, Electronics and Mobile Communication Conference (IEEE IEMCON)*. Virtual, October 2021.

[35] Eric Shoemaker*, Harrison Randolph*, James Bryce, and **Husnu S. Narman**. "Designing Crowdsourcing Software to Inform Municipalities About Infrastructure Condition". In: *IEEE International Conference on Smart Cities: Improving Quality of Life Using ICT, IoT, AI (HONET-ICT)*. Virtual, October 2021.

[34] Tarannum Zaki, Ismat Jahan, Md. Shohrab Hossain, and **Husnu S. Narman**. "An IoT-Based Complete Smart Drainage System for a Smart City". In: *IEEE Information Technology, Electronics and Mobile Communication Conference (IEEE IEMCON)*. Virtual, October 2021.

[33] Neamat Al Sarah, Fahmida Yasmin Rifat, Md. Shohrab Hossain, and **Husnu S. Narman**. "An Efficient Android Malware Prediction Using Ensemble Machine Learning Algorithms". In: *International Conference on Mobile Systems and Pervasive Computing (MobiSPC)*. Leuven, Belgium, August 2021.

[32] Nusrath Tabassum, Farhin Faiza Neha, Md. Shohrab Hossain, and **Husnu S. Narman**. "A Hybrid Machine Learning based Phishing Website Detection Technique through Dimensionality Reduction". In: *IEEE International Black Sea Conference on Communications and Networking (IEEE BLACKSEACOM)*. Virtual, May 2021.

[31] Tanjim Munir Dipon, Md. Shohrab Hossain, and **Husnu S. Narman**. "Detecting Network Intrusion through Anomalous Packet Identification". In: *International Telecommunication Networks and Applications Conference (ITNAC)*. Virtual, November 2020.

[30] Md. Khairul Islam, Prithula Hridi, Md. Shohrab Hossain, and **Husnu S. Narman**. "Network Anomaly Detection Using LightGBM: A Gradient Boosting Classifier". In: *International Telecommunication Networks and Applications Conference (ITNAC)*. Virtual, November 2020.

[29] Jarred Carter*, **Husnu S. Narman**, Ozlem Cosgun, and Jinwei Liu. "Trade-off Model of Fog-Cloud Computing for Space Information Networks". In: *IEEE Cloud Summit*. Virtual, October 2020.

[28] Md. Turab Hossain, Md. Shohrab Hossain, and **Husnu S. Narman**. "Detection of Undesired Events on Real-World SCADA Power System Through Process Monitoring". In: *IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*. Virtual, October 2020.

[27] **Husnu S. Narman**, Cameron Berry*, Alex Canfield*, Logan Carpenter*, Jeremy Giese*, Neil Loftus$^{\pm}$, and Isabella Schrader$^{\pm}$. "Augmented Reality for Teaching Data Structures in Computer Science". In: *IEEE Global Humanitarian Technology Conference (GHTC)*. Virtual, October 2020.

[26] Shohel Khan, Ajoy Das, Md. Shohrab Hossain, and **Husnu S. Narman**. "Prediction of Dengue Infected Areas Using a Novel Blockchain Based Crowdsourcing Framework". In: *IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*. Virtual, October 2020.

[25] Kanimozhi Kalaichelavan$^{+}$, Haroon Malik, **Husnu S. Narman**, and Sreehari Sreenath$^{+}$. "What People Complain about Drone Apps? A Large-Scale Empirical Study of Google Play Store Reviews". In: *11th International Conference on Ambient Systems, Networks and Technologies (ANT)*. Warsaw, Poland, April 2020.

[24] Renascence Tarafder Prapty, Shuhana Azmin, Md. Shohrab Hossain, and **Husnu S. Narman**. "Preventing Session Hijacking using Encrypted One-Time-Cookies". In: *Wireless Telecommunications Symposium (WTS)*. Virtual, April 2020.

[23] Sreehari Sreenath$^{+}$, Haroon Malik, **Husnu S. Narman**, and Kanimozhi Kalaichelavan$^{+}$. "Assesment and Use of Unmanned Aerial Vehicle for Civil Structural Health Monitoring". In: *3rd International Conference on Emerging Data and Industry 4.0 (EDI40)*. Warsaw, Poland, April 2020.

[22] Govind Yatnalkar$^{+}$, **Husnu S. Narman**, and Haroon Malik. "An Enhanced Ride Sharing Model Based on Human Characteristics and Machine Learning Recommender System". In: *3rd International Conference on Emerging Data and Industry 4.0 (EDI40)*. **Best Paper Award**. Warsaw, Poland, April 2020.

[21] **Husnu S. Narman** and Alymbek Damir Uulu*. "Impacts of Positive and Negative Comments of Social Media Users to Cryptocurrency". In: *IEEE International Conference on Computing, Networking and Communications (ICNC)*. Big Island, HI, February 2020.

[20] Jared Lee Lewis*, Geanina F. Tambaliuc*, **Husnu S. Narman**, and Wook-Sung Yoo. "IP Reputation Analysis of Public Databases and Machine Learning Techniques". In: *IEEE International Conference on Computing, Networking and Communications (ICNC)*. Big Island, HI, February 2020.

[19] Anh Nguyen*, Greg Weed*, and **Husnu S. Narman**. "Oral Therapeutic Tool for Speech and Feeding Therapies". In: *IEEE Global Communications Conference (GLOBECOM)*. Waikoloa, HI, December 2019.

[18] Md. Ishtiaq Ashiq, Protick Bhowmick, Md. Shohrab Hossain, and **Husnu S. Narman**. "Domain Flux-based DGA Botnet Detection Using Feedforward Neural Network". In: *IEEE Military Communication Conference (MILCOM)*. Norfolk, VA, November 2019.

[17] Mainuddin Ahmad Jonas, Risul Islam, Md. Shohrab Hossain, **Husnu S. Narman**, and Mohammed Atiquzzaman. "An Intelligent System for Preventing SSL Stripping-based Session Hijacking Attacks". In: *IEEE Military Communication Conference (MILCOM)*. Norfolk, VA, November 2019.

[16] Govind Yatnalkar$^{+}$ and **Husnu S. Narman**. "A Matching Model for Vehicle Sharing Based on User Characteristics and Tolerated-Time". In: *IEEE International Conference on Smart Cities: Improving Quality of Life Using ICT, IoT, AI (HONET-ICT)*. Charlotte, NC, October 2019.

[15] **Husnu S. Narman**, Alymbek D. Uulu*, and Jinwei Liu. "Profile Analysis for Cryptocurrency in Social Media". In: *IEEE International Symposium on Signal Processing and Information Technology (ISSPIT)*. Louisville, KY, December 2018, pp. 229–234.

[14] Govind Yatnalkar$^{+}$ and **Husnu S. Narman**. "Survey on Wireless Charging and Placement of Stations for Electric Vehicles". In: *IEEE International Symposium on Signal Processing and Information Technology (ISSPIT)*. Louisville, KY, December 2018, pp. 526–531.

[13] I. H. Mwinyi$^{+}$, **Husnu S. Narman**, K. Fang$^{+}$, and Wook-Sung Yoo. "Predictive self-learning content recommendation system for multimedia contents". In: *Wireless Telecommunications Symposium (WTS)*. Phoenix, AZ, April 2018.

[12] Jinwei Liu, Haiying Shen, and **Husnu S. Narman**. "CCRP: Customized Cooperative Resource Provisioning for High Resource Utilization in Clouds". In: *IEEE International Conference on Big Data*. Washington, DC, August 2016.

[11] **Husnu S. Narman** and Mohammed Atiquzzaman. "Primary Component Carrier Assignment in LTE-A". In: *EAI QSHINE*. Seoul, South Korea, July 2016.

[10] **Husnu S. Narman** and Mohammed Atiquzzaman. "Analysis of Joint and Partial Component Carrier Assignment Techniques in LTE and LTE-A". In: *IEEE Global Communications Conference (GLOBECOM)*. San Diego, CA, December 2015.

[9] **Husnu S. Narman** and Mohammed Atiquzzaman. "Selective Periodic Component Carrier Assignment Technique in LTE and LTE-A Systems". In: *IEEE Global Communications Conference (GLOBECOM)*. San Diego, CA, December 2015.

[8] **Husnu S. Narman** and Mohammed Atiquzzaman. "Energy aware scheduling and queue management for next generation Wi-Fi routers". In: *IEEE Wireless Communications and Networking Conference Workshops (WCNCW)*. New Orleans, LA, March 2015.

[7] **Husnu S. Narman** and Mohammed Atiquzzaman. "Joint and partial carrier components assignment techniques based on user profile in LTE systems". In: *IEEE Wireless Communications and Networking Conference (WCNC)*. New Orleans, LA, March 2015, pp. 983–988.

[6] **Husnu S. Narman** and Mohammed Atiquzzaman. "Carrier Components Assignment Method for LTE and LTE-A Systems Based on User Profile and Application". In: *IEEE GLOBECOM Workshop on Broadband Wireless Access*. Austin, TX, December 2014.

[5] **Husnu S. Narman**, Md. Shohrab Hossain, and Mohammed Atiquzzaman. "DDSS: Dynamic Dedicated Servers Scheduling for multi priority level classes in cloud servers". In: *IEEE International Conference on Communications (ICC)*. Sydney, Australia, June 2014, pp. 3082–3087.

[4] **Husnu S. Narman**, Md. Shohrab Hossain, and Mohammed Atiquzzaman. "h-DDSS: Heterogeneous Dynamic Dedicated Servers Scheduling in cloud computing". In: *IEEE International Conference on Communications (ICC)*. Sydney, Australia, June 2014, pp. 3475–3480.

[3] **Husnu S. Narman**, Md. Shohrab Hossain, and Mohammed Atiquzzaman. "Multi Class Traffic Analysis of Single and multi-band Queuing System". In: *IEEE Global Communications Conference (GLOBECOM)*. Atlanta, GA, December 2013, pp. 1422–1427.

[2] Md. Shohrab Hossain, **Husnu S. Narman**, and Mohammed Atiquzzaman. "A Novel Scheduling and Queue Management Scheme for multi-band Mobile Routers". In: *IEEE International Conference on Communications (ICC)*. Budapest, Hungary, June 2013, pp. 3787–3791.

[1] **Husnu S. Narman**, Turgay Korkmaz, and Suleyman Tek. "Utilizing distance distribution in determining topological characteristics of multi-hop wireless networks". In: *IEEE International Conference on Computing, Networking and Communications (ICNC)*. San Diego, CA, January 2013, pp. 149–154.

**Posters**

[27] 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: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, March 2025.

[26] Connor Stonestreet* and **Husnu S. Narman**. "Automated Detection of Track Gauge Deviations Using Video and Depth Cameras with Machine Learning". In: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, March 2025.

[25] Eriz Zabala* and **Husnu S. Narman**. "Development and Evaluation of an AI-Enhanced Python Programming Education System". In: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, March 2025.

[24] Alexander Lambert$^{+}$, Austin Woodrum$^{+}$, **Husnu S. Narman**, Paulus Wahjudi, and Karen Guttieri. "Disinformation and Cyberterrorism: Eroding Societal Resilience in the Digital Age". In: *Workshop on Cyber Resilience and National Power Projection*. West Point, NY, February 2025.

[23] Tina Cartwright, Julie Snyder-Yuly, **Husnu S. Narman**, and Wook-Sung Yoo. "Relationship between Grit and Mindset on Undergraduate Engineering Student Retention". In: *S-STEM Scholars & PI Meeting*. Chicago, IL, November 2024.

[22] Muna Lentison*, Cameron Green*, and **Husnu S. Narman**. "Marshall University AI Chatbot App". In: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, February 2024.

[21] Cade Parlato*, Neil Loftus*, Sam McGrath*, Furkan Kizilay, **Husnu S. Narman**, and Rick Gage. "Calculating Aboveground Forest Biomass using Machine Learning with Image Segmentation". In: *Undergraduate Research Day at the Capitol (URDC) and S-STEM Scholars & PI Meeting*. Charleston, WV, February 2024.

[20] Neil Loftus*, Cameron Green*, and **Husnu S. Narman**. "Teaching Cybersecurity with Handson Machine Learning Integrated Simulations". In: *Annual S-STEM Scholars Meeting*. Washington, DC, September 2023.

[19] Neil Loftus*, Cameron Green*, Liana Karim$^{\pm}$, Sawyer Slack$^{\pm}$, and **Husnu S. Narman**. "Use of Machine Learning in Networks and Cybersecurity Education". In: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, February 2023.

[18] Josh Maddy* and **Husnu S. Narman**. "Virtual Reality Museum Application for the Arts". In: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, February 2023.

[17] Neil Loftus*, Cameron Green*, and **Husnu S. Narman**. "The Cybersecurity Packet Control Simulator CSPCS". In: *IEEE COMPSAC Annual Student OER Contest*. **Second Best Presentation Award**. June 2022.

[16] Eric M. Dillon*, Craig Carpenter II*, John Cook*, Thomas David Wills*, and **Husnu S. Narman**. "A Machine Learning-Based Automatic Feedback System to Teach Cybersecurity Principles to K-12 and College Students". In: *Marshall Computer Science Symposium on Emerging Technologies and Undergraduate Research Day*. Huntington, WV, April 2022.

[15] Neil Loftus*, Cameron Green*, and **Husnu S. Narman**. "The Cybersecurity Packet Control Simulator CSPCS". In: *Marshall Computer Science Symposium on Emerging Technologies and Undergraduate Research Day*. **Second Best Presentation Award**. Huntington, WV, April 2022.

[14] Josh Maddy*, Eric Dillon*, and **Husnu S. Narman**. "Adapting a GenCyber Teacher Training Camp to Virtual Learning". In: *Marshall Computer Science Symposium on Emerging Technologies and Undergraduate Research Day*. Huntington, WV, April 2022.

[13] Eric Shoemaker* and **Husnu S. Narman**. "Crowdsourcing Infrastructure Management System". In: *Marshall Computer Science Symposium on Emerging Technologies*. **Best Presentation Award**. Huntington, WV, April 2021.

[12] William Coleman* and **Husnu S. Narman**. "Learning Object-Oriented Programming Concepts with Augmented Reality". In: *Undergraduate Research Day at the Capitol (URDC)*. Virtual, March 2021.

[11] William Coleman* and **Husnu S. Narman**. "Enhancing Computer Science Education with Augmented Reality". In: *West Virginia University Summer Undergraduate Research Symposium*. Virtual, July 2020. URL: `https://voicethread.com/myvoice/thread/14889356/92900841`.

[10] Jarred Carter* and **Husnu S. Narman**. "Trade-off Model of Fog-Cloud Computing for Space Information Networks". In: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, February 2020.

[9] James Farley* and **Husnu S. Narman**. "Emotion Classification of Users Based on Posts and Comments in Social Media". In: *Undergraduate Research Day at the Capitol (URDC)*. Charleston, WV, February 2020.

[8] Cameron Berry*, Alex Canfield*, Logan Carpenter*, Jeremy Giese*, and **Husnu S. Narman**. "Augmented Reality in Computer Science Education". In: *Coding and Cybersecurity Summit*. Charleston, WV, December 2019.

[7] Anh Nguyen*, Greg Weed*, and **Husnu S. Narman**. "Oral Therapeutic Tool". In: *Marshall Computer Science Symposium on Emerging Technologies*. Huntington, WV, April 2019.

[6] Alymbek Damir Uulu* and **Husnu S. Narman**. "Education Analysis of Cryptocurrency for Protection from Social Engineering". In: *Marshall Computer Science Symposium on Emerging Technologies*. Huntington, WV, April 2019.

[5] Govind Yatnalkar$^{+}$ and **Husnu S. Narman**. "Machine Learning Vehicle Sharing & Matching Model Based on User Profiling". In: *Marshall Computer Science Symposium on Emerging Technologies*. Huntington, WV, April 2019.

[4] Geanina Tambaliu*, Jared Lee Lewis*, **Husnu S. Narman**, and Wook-Sung Yoo. "Automated IP Reputation Analyzer". In: *Undergraduate Research Day at the Capitol (URDC) and Cybersecurity and Privacy Day (Sponsored by WV Office of Technology)*. Charleston, WV, February 2019. URL: `https://hsnarman.github.io/POSTER/IPReputation.jpg`.

[3] Alymbek Damir Uulu* and **Husnu S. Narman**. "Education Analysis of Cryptocurrency for Protection from Social Engineering". In: *Cybersecurity and Privacy Day (Sponsored by WV Office of Technology)*. Charleston, WV, February 2019. URL: `https://hsnarman.github.io/POSTER/SocialEngineering.jpg`.

[2] Alex Kacinari*, Chris Murphy*, Derek M Staley*, and **Husnu S. Narman**. "Suturing Wound Simulation". In: *Marshall Computer Science Symposium on Emerging Technologies*. **3**$^{rd}$ **Best Presentation Award**. Huntington, WV, April 2018.

[1] Charlie Murphy*, Michael B Branard*, Steven D. Gunnels*, and **Husnu S. Narman**. "Game-Story Book". In: *Marshall Computer Science Symposium on Emerging Technologies*. Huntington, WV, April 2018.

### Technical Reports

[6] Ibrahim Hussein Mwinyi$^{+}$, **Husnu S. Narman**, Kuo-Chi Fang$^{+}$, and Wook-Sung Yoo. *Recommendation System based on Predictive Approach*. Marshall University, October 2017. URL: `https://hsnarman.github.io/TR/17-Predictive-TR-MU-CITE-17-100.pdf`.

[5] **Husnu S. Narman** and Mohammed Atiquzzaman. *User Profile Carrier Components Assignment Method in LTE Systems*. University of Oklahoma, October 2014. URL: `https://hsnarman.github.io/TR/14-User-Profile-TR-OU-TNRL-14-102.pdf`.

[4] **Husnu S. Narman** and Mohammed Atiquzzaman. *Analysis of Static Partial Carrier Components Assignment in LTE Systems*. University of Oklahoma, September 2014. URL: `https://hsnarman.github.io/TR/14-Lte-Cc-Static-TR-OU-TNRL-14-101.pdf`.

[3] **Husnu S. Narman**, Md Shohrab Hossain, and Mohammed Atiquzzaman. *DDSS:Dynamic Dedicated Servers Scheduling for multi priority level classes in cloud servers*. University of Oklahoma, September 2013. URL: `https://hsnarman.github.io/TR/13-cloud-priority-TR-OU-TNRL-13-102.pdf`.

[2] Md Shohrab Hossain, **Husnu S. Narman**, and Mohammed Atiquzzaman. *Scheduling and Queue Management of Multi-band Mobile Routers*. University of Oklahoma, February 2013. URL: `https://hsnarman.github.io/TR/13-Multi_band_multi_TR-OU-TNRL-13-101.pdf`.

[1] **Husnu S. Narman**, Md Shohrab Hossain, and Mohammed Atiquzzaman. *Multi-Class Traffic Analysis of Single and Multi-band Queuing System*. University of Oklahoma, October 2012. URL: `https://hsnarman.github.io/TR/12-Multi_Band_Single_TR-OU-TNRL-12-101.pdf`.

### Press and News

[2] "Summer Camp on Robotics and Cybersecurity". In: *WCHS TV*. Huntington, WV, June 2019. URL: `https://hsnarman.github.io/media/news/wsaz/camp2019.mp4`.

[1] "Summer Camp on Robotics". In: *WCHS TV*. Huntington, WV, June 2018. URL: `https://hsnarman.github.io/media/news/wsaz/camp2018.mp4`.