Dr Nagender Aneja

Collegiate Associate Professor, Bradley Department of Electrical and Computer Engineering Virginia Tech, Blacksburg, VA

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Professional Experience

Virginia Tech, Blacksburg, VA

Collegiate Associate Professor, Bradley Department of Electrical and Computer Engineering 1. Teaching

- ECE 3574 Applied Software Design; ECE 3564 Introduction to Networking; ECE 4805 and ECE 4806 Major Design Experience
- 2. Research
 - Mentoring Three Teams of ECE 4805 and ECE 4806 Major Design Experience on sponsored projects Prompt Classification, RAG for Codebases, and LLM.
 - Submitted NSF NSERC Canada Joint Proposal to NSF on Ransomware Attacks. The proposal has been submitted in collaboration with Dr Murat Kantarcioglu (Virginia Tech), Dr Bharat Bhargava (Purdue University), Dr Issa Traore (University of Victoria), and Dr Isaac Woungang (Toronto Metropolitan University)
 - Collaborating with Shafkat Islam, Lixiang Li, and Zizheng Liu PhD Candidates with Prof Bharat Bhargava at Department of Computer Science, Purdue University, West Lafayette.

Purdue University, West Lafayette, IN

Research Scholar, Department of Computer Science

- Worked on Sandia Labs project on Resilience Enhancement in Space Computing Platform and collaborated with Shafkat Islam, PhD Student. One paper has been published and two papers are in-progress under this project.
- $_{\odot}\,$ Mentored a undergraduate student Srinjoy Dutta to evaluate LLMs for programming questions
- Collaborated with Lixiang Li, PhD Candidate for custom language models. One paper has been published and we
 working on extending this work.
- Worked with Prof Bharat Bhargava to contribute on the development of a NSF research proposal titled "Intelligent Defenses against Collaborative Attacks in Flying Ad Hoc Networks" as part of the SaTC: CORE initiative.
- Worked with graduate students of Dr. Sooyeon Jeong in the Human-Agent Interaction Laboratory for simulating Backchannelling for AI Agents in Social Robots. Integrated OpenAI API and Furhat Remote API to enable natural backchannel responses for Furhat robot, enhancing human-robot interaction.

ResearchID.co

Founder and Developer

Maintaining the web application https://researchid.co/, which serves 90K+ faculty members and researchers globally. ResearchID simplifies profile management for researchers by consolidating multiple research profiles into a single, free webpage that displays all publications and achievements from various sources. With minimal manual effort, researchers can showcase and update their work using their Scopus Author ID and Google Scholar URL. The platform automatically updates publications, citations, h-index, and i10-index.

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Dec 2018-Till date

Aug 2023-Till Aug 2024

Aug 2024–Till date

Universiti Brunei Darussalam

- 1. Teaching
 - Taught courses in Data Analytics, Python, R, Tableau, Internet Programming, Computer Networks, Computer Programming, Data Structure, Digital Transformation.
 - Conducted annual one-week summer workshops on Digital Transformation in 2022 and 2023, attended by students from Singapore Management University.

2. Research

- Supervised one PhD student and one Research Assistant in projects focused on Artificial Intelligence. There are two papers in progress.
- Mentored 10+ undergraduate students in deep learning projects, one of which has published a paper in Scopusindexed journal.

3. Administration

- Served as Program Leader for Computer Science during 2021-2022, overseeing curriculum development and faculty coordination.
- Designed and implemented a publication tracking system for university academic staff, contributing to a 90% efficiency in the task which is helpful for improvement in QS ranking.
- Contributed to develop and implement IP Policy for the University. Reviewed IDFs to recommend filing of patent applications.

Microsoft Patent Research Services

Associate IP Lead, CPA Global Pvt Ltd (now Clarivate), India

- Awarded Advanced Diploma Intellectual Property Rights with Review Competency by CPA Global and Microsoft, https://naneja.github.io/certs/2012_mscpa.pdf
- Developed proprietary tools and scripts using Perl, Excel VBA, and Excel Toolbars resulting in around 30% increase in efficiency for patent analysis tasks.
- o Presented findings and tool demonstrations at Microsoft's Redmond Campus.
- Nominated for the CPA Global Business Innovation Awards in both 2010 and 2011 in recognition of pioneering solutions in business analytics.

Education

PhD Computer Engineering, Faculty of Engineering and Technology

J.C. Bose University of Science & Technology YMCA, India

- Thesis: Conducted in-depth research on the "Optimization of Routing Protocols and Profile Matching Algorithms in Ad-hoc Social Networks"
- Publications: Authored 11 academic papers, including 4 in SCIE-indexed journals, focusing on areas such as ad-hoc networking and optimization algorithms.
- Intellectual Property: Secured one US patent on an innovative algorithm enhancing profile matching in ad-hoc social networks.
- Software Development: Developed an Android mobile app to simulate ad-hoc social networks in airplane mode using WiFi Direct, with over 1,000 downloads.
- Awards: Recipient of the Brunei ICT Award with USD 8,000 and the J.C. Bose University of Science & Technology YMCA PhD Research Innovation Award for exceptional contributions to the field.

ME Computer Technology and Applications

Delhi College of Engineering, Delhi, India

MSc Mathematics

MD University Rohtak, India, First Class First

Feb 2013–Aug 2024

2007-2012

Jan 16, 2019

Awarded the Gold Medal for achieving First Rank in the Department of Mathematics for M.Sc. Examination , https://naneja.github.io/certs/1996_mscm.pdf

Research Grant

- 1. Submitted a NSF Proposal on Ransomware Prevention using Machine Learning in collaboration with University of Victoria, Toronto Metropolitan University, and Purdue University.
- 2. Working on NSF proposal in collaboration with Pudrue University focusing on machine learning solutions for mitigating collaborative attacks, responsible for designing algorithms.
- 3. Secured a research grant on Defense against Adversarial Attacks on Deep Convolutional Neural Networks from University of Brunei.
 - As Principal Investigator (PI), successfully procured a grant of USD 21,755 from Universiti Brunei Darussalam. The funding supports ongoing research aimed at enhancing the resilience of deep learning models against adversarial attacks.

Research Students

Major Design Experience, BS Computer Enginnering Students at Virginia Tech. The projects are sponsored by Parsons Corporation.

- Retrieval-Augmented Generation (RAG) for Codebases: The project aims to extend the capabilities of Retrieval-Augmented Generation (RAG) techniques, traditionally applied to raw content and documents, to software codebases. This project will explore innovative methods to enhance software development processes by leveraging RAG for code chunking, documentation, and rewriting.
- Performant Prompt Classification in GenAI: The project aims to enhance the efficiency and accuracy of classifying user prompts in real-time applications. This project is crucial for improving user interactions with Generative Artificial Intelligence (GenAI) systems, particularly in environments where rapid and precise un- derstanding of user intent is essential.

Collaboration with Prof Bharat Bhargava's PhD Students at Purdue University.....

- Ph.D. Candidate: Lixiang Li Research on (i) Consumer Sentiment using Reinforcement Learning and (ii) Temporal Reasoning; one paper accepted in NeurIPS Workshop and one paper in-progress.
- Ph.D. Candidate: Shafkat Islam Focus on resilent programming model for space computing platforms; one paper is under review and two papers currently in-progress.
- o Ph.D. Candidate: Zizheng Liu Focus on Collaborative Attacks in Satellite based Fedrated Learning.

Contributed in GEM-benchmark/NL-Augmenter

- Replace Spelling Perturbation: This transformation acts like a perturbation to test robustness. Few words picked at random are replaced with their common spelling errors if these words are in the corpus of mis-spell words. Generated transformations display high similarity to the source sentences i.e. the code outputs highly precise generations, https://github.com/GEM-benchmark/NL-Augmenter/tree/main, https://github.com/GEM-benchmark/NL-Augmenter/transformations/replace_spelling.
- One paper published NI-augmenter: A framework for task-sensitive natural language augmentation," https://nejlt.ep.liu.se/article/view/4725

Awards

- Research Award 2021: Awarded by JC Bose University of Science and Technology, India for outstanding SCIE-indexed publications produced during my Ph.D. studies, https://naneja.github.io/certs/2021_ phd_research_award.pdf
- Brunei ICT Award 2016: Recognized for the development of a Mobile Application that enables interestsharing and message exchange while in Airplane mode. It is an annual event co-organised by the Ministry of Transport and Infocommunications, the Authority for Info-Communications Technology Industry of Brunei Darussalam (AITI) and InfoCom Federation Brunei (IFB) to stimulate innovation and creativity in Information and Communications Technology (ICT) industry amongst individual, students and associations including SMEs. https://naneja.github.io/certs/2016_bicta.pdf
- Awarded the Gold Medal for achieving First Rank in the Department of Mathematics for M.Sc. Examination https://naneja.github.io/certs/1996_mscm.pdf
- Innovation Award Nominations: Nominated twice by CPA Global in 2011 and 2012 for developing software tools that enhance patent analysis. A few employees from all global offices are nominated based on each category and spent time together for one week in Jersey, UK.
- Patents: Granted two U.S. patents via USPTO; US10264609B2, "Method and system for ad-hoc social networking and profile matching" provides a novel way to create multiple profiles based on geographic locations for social networking. US10834035B2, "Instant messaging for mobile device with offline and online mode," provides a method for social networking by detecting if the message can be sent using offline mode and uses online mode when the ad-hoc network is not available. https://naneja.github.io/ certs/10834035.pdf and https://naneja.github.io/certs/10264609.pdf
- Best Paper Award: Received for the paper titled "Transfer Learning Using CNN for Handwritten Devanagari Character Recognition" at International Conference on Advances in Information Technology (ICAIT), Chikmagalur, India, 2019.

Editor/Advisor/Judge

- Judge, QS Reimagine Education Awards 2024 Second Round Judge, https://www.credential.net/ 75c7e304-70db-4166-b7c9-0691778b166f#acc.yGPfSp3U
- 2. Judge, QS Reimagine Education Awards 2023 First Round Judge https://www.credential.net/ 4249c21e-0796-4fa4-bad9-bad349bd91da#acc.wfPyglV1
- 3. Associate Editor of Engineering, ASEAN Journal on Science and Technology for Development, https: //ajstd.ubd.edu.bn/journal/editorialboard.html (Scopus-indexed)

Talks

- 1. Nagender Aneja Speaker, Retrieval-Augmented Generation (RAG) in Healthcare on April 21, 2025 at NIT Hamirpur, Himachal Pradesh, India
- Nagender Aneja Speaker, Retrieval-Augmented Generation (RAG) in Healthcare at ATAL Online 6 Day Faculty Development Programmes on Smart Healthcare Systems: Enhancing Patient Care with IoT and AI by Amity University, Noida, India
- Keynote Speaker, EAI BDCC 2024 7th EAI International Conference on Big Data Innovation for Sustainable Cognitive Computing December 20-21, 2024 Coimbatore, India https://bdcc-conf.eai-conferences. org/2024/keynotes/
- 4. Speaker, Online Lecture Series: Transforming Education Through Artificial Intelligence, Universitas Islam Indonesia, Nov 2023, https://naneja.github.io/certs/2023uii.pdf

- 5. Webinar, Data Decoded with Tableau, 2021, IEEE Delhi Section, https://naneja.github.io/talks/tableau
- Keynote Speaker, Recent Trends in Computing, June 2021, India https://naneja.github.io/certs/ 2021_icrtc.pdf
- 7. Expert Speaker, Webinar on Deep Learning using PyTorch with Practical Implementation of MNIST Dataset, Feb 2021, India https://naneja.github.io/certs/2021_abes.pdf

Patents

- Sandhya Aneja; Nagender Aneja; Mohamad Iskandar Petra, "Instant Messaging for Mobile Device with Offline and online mode," US 10,834,035, Nov 10, 2020 (Granted) https://naneja.github.io/certs/ 10834035.pdf
- Nagender Aneja and Sapna Gambhir, "Method and System for Ad-hoc Social Networking and Profile Matching," US 10,264,609, Apr 16, 2019 (Granted) https://naneja.github.io/certs/10264609.pdf
- Nagender Aneja and Sandhya Aneja, "Anti-fraud computer implemented method for financial card transaction," US 2015/0339657, Nov 26, 2015 (Published) https://naneja.github.io/certs/20150339657. pdf

Publications

Recent Publications

- Sandhya Aneja, Nagender Aneja, "Fingerprinting Browsers in Encrypted Communications." IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), IBM T. J. Watson Research Center, NY, 2024
- Lixiang Li, Nagender Aneja, Alina Nesen, Bharat Bhargava, "SentimentPulse: Temporal-Aware Custom Language Models vs. GPT-3.5 for Consumer Sentiment," https://neurips.cc/virtual/2023/76523 - Failure Modes in the Age of Foundation Models (Accepted in NeurIPS 2023 Workshop)
- Shafkat Islam, Nagender Aneja, Ruy de Oliveira, Sandhya Aneja, Bharat Bhargava Jason Hamlet, Chris Jenkins "Detect & Adapt: A Resiliency EnhancementMechanism for Space Computing Platforms" Research Track on Cyber Warfare, Cyber Defense, & Cyber Security (CSCI-RTCW), 10th Annual Conf. on Computational Science & Computational Intelligence (CSCI'23)

Journal Publications

- Nishtha Jatana, Mansehej Singh, Charu Gupta, Geetika Dhand, Shaily Malik, Pankaj Dadheech, Nagender Aneja, Sandhya Aneja "Differentially processed optimized collaborative rich text editor." Multimedia Tools and Applications, 2024. pp. 1–16 https://link.springer.com/content/pdf/10.1007/ s11042-024-19734-3.pdf
- Chour Singh Rajpoot, Gajanand Sharma, Praveen Gupta, Pankaj Dadheech, Umar Yahya & Nagender Aneja (2024) Feature Selection-based Machine Learning Comparative Analysis for Predicting Breast Cancer, Applied Artificial Intelligence, 38:1, 2340386, DOI: 10.1080/08839514.2024.2340386 https: //www.tandfonline.com/doi/full/10.1080/08839514.2024.2340386
- Jatana, Nishtha, Mansehej Singh, Charu Gupta, Geetika Dhand, Shaily Malik, Pankaj Dadheech, Nagender Aneja, and Sandhya Aneja. "Differentially processed optimized collaborative rich text editor." Multimedia Tools and Applications (2024): 1-16 https://link.springer.com/article/10.1007/ s11042-024-19734-3.
- 4. Dhole, Kaustubh D., Varun Gangal, Sebastian Gehrmann, Aadesh Gupta, Zhenhao Li, Saad Mahamood, Abinaya Mahendiran et al. "Nl-augmenter: A framework for task-sensitive natural language augmentation." arXiv preprint arXiv:2112.02721 (2021) https://nejlt.ep.liu.se/article/view/4725

- 5. Priyanka Sharma, Pankaj Dadheech, Nagender Aneja, and Sandhya Aneja. "Predicting Agriculture Yields Based on Machine Learning using Regression and Deep Learning." IEEE Access (2023), https: //ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=10271389.
- 6. Wang Hui, Nagender Aneja, Sandhya Aneja, Abdul Naim "Conversational chat system using attention mechanism for COVID-19 inquiries." International Journal of Intelligent Networks, 2023. https://www. sciencedirect.com/science/article/pii/S266660302300012X
- 7. Ajay Bansal, Virendra Sangtani, Pankaj Dadheech, Nagender Aneja, Umar Yahya "Biogeography-based Optimization of Artificial Neural Network (BBO-ANN) for Solar Radiation Forecasting." Applied Artificial Intelligence, 2023. vol. 37 pp. 2166705 https://www.tandfonline.com/doi/pdf/10.1080/08839514. 2023.2166705
- Sheba David, Rajan Rajabalaya, Nagender Aneja "Medicated patch for preventing exit site infections during peritoneal dialysis." Invention Disclosure, 2023. pp. 100010 https://www.sciencedirect.com/ science/article/pii/S2772444123000010
- 9. Kavita Sheoran, Arpit Bajgoti, Rishik Gupta, Nishtha Jatana, Geetika Dhand, Charu Gupta, Pankaj Dadheech, Umar Yahya, Nagender Aneja "Pronunciation Scoring with Goodness of Pronunciation and Dynamic Time Warping." IEEE Access, 2023. https://ieeexplore.ieee.org/stamp/stamp.jsp? arnumber=10042421
- Nagender Aneja, Sandhya Aneja, Bharat Bhargava "AI Enabled Learning Architecture Using Network Traffic Traces over IoT Network." Wireless Communications and Mobile Computing, 2023. vol. 2023 https://www.hindawi.com/journals/wcmc/2023/8658278/
- Anand Kumar, Dharmesh Dhabliya, Pankaj Agarwal, Nagender Aneja, Pankaj Dadheech, Sajjad Jamal, Owusu Antwi "Cyber-Internet Security Framework to Conquer Energy-Related Attacks on the Internet of Things with Machine Learning Techniques." Computational Intelligence and Neuroscience, 2022. vol. 2022 https://www.hindawi.com/journals/cin/2022/8803586/
- 12. Sandhya Aneja, Nagender Aneja, Ponnurangam Kumaraguru "Predictive Linguistic Cues for Fake News: A Societal AI Problem." IAES International Journal of Artificial Intelligence (IJ-AI), 2022. vol. 11(4) https://ijai.iaescore.com/index.php/IJAI/article/view/21798
- Sandhya Aneja, Nagender Aneja, Pg Abas, Abdul Naim "Defense against adversarial attacks on deep convolutional neural networks through nonlocal denoising." IAES International Journal of Artificial Intelligence (IJ-AI), 2022. vol. 11(3) https://ijai.iaescore.com/index.php/IJAI/article/view/21503
- Sandhya Aneja, Nagender Aneja, Bharat Bhargava, Rajarshi Chowdhury "Device fingerprinting using deep convolutional neural networks." International Journal of Communication Networks and Distributed Systems, 2022. vol. 28 pp. 171–198 https://www.inderscienceonline.com/doi/10.1504/IJCNDS. 2022.121197
- 15. Sandhya Aneja, Nagender Aneja, Pg Abas, Abdul Naim "Transfer learning for cancer diagnosis in histopathological images." IAES International Journal of Artificial Intelligence (IJ-AI), 2022. vol. 11(1) https://ijai.iaescore.com/index.php/IJAI/article/view/21133
- Nur Hazis, Nagender Aneja, Rajan Rajabalaya, Sheba David "Systematic Patent Review of Nanoparticles in Drug Delivery and Cancer Therapy in the Last Decade." Recent Advances in Drug Delivery and Formulation, 2021. vol. 15 pp. 59 https://www.eurekaselect.com/article/115699
- 17. Rajarshi Chowdhury, Sandhya Aneja, Nagender Aneja, Pg Abas "Packet-level and IEEE 802.11 MAC frame-level network traffic traces data of the D-Link IoT devices." Data in Brief, 2021. vol. 37 pp. 107208 doi: 10.1016/j.dib.2021.107208 https://www.sciencedirect.com/science/article/pii/S2352340921004923

- Nagender Aneja, Sapna Gambhir "Recent Advances in Ad-Hoc Social Networking: Key Techniques and Future Research Directions." Wireless Personal Communications, 2021. vol. 117 pp. 1735–1753 https://link.springer.com/article/10.1007/s11277-020-07942-7
- Nagender Aneja, Sapna Gambhir "Profile-based ad hoc social networking using Wi-Fi direct on the top of android." Mobile Information Systems, 2018. vol. 2018 https://www.hindawi.com/journals/misy/ 2018/9469536/
- 20. Nagender Aneja, Sapna Gambhir "Social profile aware AODV Protocol for ad-hoc social networks." Wireless Personal Communications, 2017. vol. 97 pp. 4161–4182 https://link.springer.com/article/10. 1007/s11277-017-4718-x
- 21. Sapna Gambhir, Nagender Aneja, Liyanage De "Piecewise maximal similarity for ad-hoc social networks." Wireless Personal Communications, 2017. vol. 97 pp. 3519–3529 https://link.springer.com/ article/10.1007/s11277-017-4683-4
- 22. Nagender Aneja, Sapna Gambhir "Middleware architecture for ad-hoc social network." Research Journal of Applied Sciences, Engineering and Technology, 2016. vol. 13 pp. 690-695 https://maxwellsci.com/ msproof.php?doi=rjaset.13.3342
- 23. Nagender Aneja, Sapna Gambhir "Geo-social profile matching algorithm for dynamic interests in adhoc social network." Social Networking, 2014. vol. 3 pp. 240 https://www.scirp.org/journal/ paperinformation.aspx?paperid=51108
- 24. Nagender Aneja, Thomas George "Verification of Forecasts from High Resolution Numerical Weather Prediction Model." Research Journal of Applied Sciences, Engineering and Technology, 2014. vol. 8 pp. 1255-1258 https://maxwellsci.com/jp/mspabstract.php?jid=RJASET&doi=rjaset.8.1092
- 25. Sapna Gambhir, Nagender Aneja "Ad-hoc social network: A comprehensive survey." International Journal of Scientific and Engineering Research, 2013. vol. 4 pp. 156–160 https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.415.7643&rep=rep1&type=pdf

Conference Publications

- Hassaan Syed, Nagender Aneja, Owais Malik, Mohammed Minhaj, Deep Explainable Ensemble for Medical Image Analysis, TENCON 2024-2024 IEEE Region 10 Conference (TENCON), 2024. pp. 1737–1740 https://ieeexplore.ieee.org/abstract/document/10903010
- Nishad Mathur, Ashutosh Sharma, Shubh Kaushik, VS Bakkialakshmi, Vishishta Kavadiya, Nagender Aneja, SAGA-Integrating AI for Enhanced Recruitment: A System with Audio-Video Proctoring and Comprehensive Evaluation, 2024 2nd International Conference on Advances in Computation, Communication and Information Technology (ICAICCIT), 2024. vol. 1 pp. 395–399 https://ieeexplore.ieee.org/ abstract/document/10912328
- Sandhya Aneja, Nagender Aneja "Fingerprinting Browsers in Encrypted Communications." IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), IBM T. J. Watson Research Center, NY, 2024
- 4. Lixiang Li, Nagender Aneja, Alina Nesen, Bharat Bhargava, "SentimentPulse: Temporal-Aware Custom Language Models vs. GPT-3.5 for Consumer Sentiment" Accepted in NeurIPS 2023 Workshop - Failure Modes in the Age of Foundation Models
- Shafkat Islam, Nagender Aneja, Ruy de Oliveira, Sandhya Aneja, Bharat Bhargava Jason Hamlet, Chris Jenkins "Detect & Adapt: A Resiliency EnhancementMechanism for Space Computing Platforms" Research Track on Cyber Warfare, Cyber Defense, & Cyber Security (CSCI-RTCW), 10th Annual Conf. on Computational Science & Computational Intelligence (CSCI'23)

- Gagan Thakral, Sapna Gambhir, Nagender Aneja "Proposed methodology for Early Detection of Lung Cancer with low-dose CT Scan using Machine Learning." 2022 International Conference on Machine Learning, Big Data, Cloud and Parallel Computing (COM-IT-CON), 2022. vol. 1 pp. 662-666 https: //ieeexplore.ieee.org/document/9850607
- Sudhir Sharma, Kaushal Bhatt, Rimmy Chabra, Nagender Aneja "A Comparative Performance Model of Machine Learning Classifiers on Time Series Prediction for Weather Forecasting." Advances in Information Communication Technology and Computing, 2022. pp. 577–587 https://link.springer.com/ chapter/10.1007/978-981-19-0619-0_50
- 8. Singh, Sandeep, Mohit Rajput, Shalini Bhaskar Bajaj, Khushboo Tripathi, and Nagender Aneja. "Comparative Analysis of Detection of Network Attacks Using Deep Learning Algorithms." In International Conference on Advanced Communications and Machine Intelligence, pp. 35-46. Singapore: Springer Nature Singapore, 2022.
- Sandeep Singh, Shalini Bajaj, Khushboo Tripathi, Nagender Aneja "An Inspection of MANET'S Scenario using AODV, DSDV and DSR Routing Protocols." 2022 2nd International Conference on Innovative Practices in Technology and Management (ICIPTM), 2022. vol. 2 pp. 707-712 https://ieeexplore. ieee.org/document/9753951
- Sandhya Aneja, Melanie En, Nagender Aneja "Collaborative adversary nodes learning on the logs of IoT devices in an IoT network." 2022 14th International Conference on COMmunication Systems & NETworkS (COMSNETS), 2022. pp. 231–235 https://ieeexplore.ieee.org/document/9668602
- 11. Rajarshi Chowdhury, Sandhya Aneja, Nagender Aneja, Emeroylariffion Abas "Network traffic analysis based iot device identification." Proceedings of the 2020 the 4th International Conference on Big Data and Internet of Things, 2020. pp. 79–89 https://dl.acm.org/doi/10.1145/3421537.3421545
- Sandhya Aneja, Siti Nur, Nagender Aneja "Neural Machine Translation model for University Email Application." 2020 2nd Symposium on Signal Processing Systems, 2020. pp. 74–79 https://dl.acm. org/doi/10.1145/3421515.3421522
- Nagender Aneja, Sandhya Aneja "Transfer learning using CNN for handwritten devanagari character recognition." 2019 1st International Conference on Advances in Information Technology (ICAIT), 2019. pp. 293-296 https://ieeexplore.ieee.org/abstract/document/8987286
- Nagender Aneja, Sandhya Aneja "Detecting Fake News with Machine Learning." International Conference on Deep Learning, Artificial Intelligence and Robotics, 2019. pp. 53–64 https://link.springer.com/ chapter/10.1007/978-3-030-67187-7_7
- Sandhya Aneja, Nagender Aneja, Md Islam "IoT device fingerprint using deep learning." 2018 IEEE international conference on internet of things and intelligence system (IOTAIS), 2018. pp. 174–179 https://ieeexplore.ieee.org/abstract/document/8600824
- Sapna Gambhir, Samridhi Mangla, Nagender Aneja "Software Design for social profile matching algorithm to create ad-hoc social network on top of android." 2016 3rd International Conference on Computing for Sustainable Global Development (INDIACom), 2016. pp. 3450-3454 https://ieeexplore.ieee.org/ document/7724906
- Sapna Gambhir, Nagender Aneja, Samridhi Mangla "Need of ad-hoc social network based on users' dynamic interests." 2015 International Conference on Soft Computing Techniques and Implementations (ICSCTI), 2015. pp. 52–56 https://ieeexplore.ieee.org/document/7489562
- Nagender Aneja, Sapna Gambhir "Geo-social semantic profile matching algorithm for dynamic interests in adhoc social network." 2015 IEEE International Conference on Computational Intelligence & Communication Technology, 2015. pp. 354–358 https://ieeexplore.ieee.org/document/7078725

- Nagender Aneja, Sapna Gambhir "Various Issues in Ad-hoc Social Networks (ASN)." National Conference on Recent trends in computer science and Information Technology (RTCSIT), 2012. https://naneja. github.io/files/pubs/Various-Issues-in-Ad-hoc-Social-Networks.pdf
- Sandhya Khurana, Neelima Gupta, Nagender Aneja "Minimum exposed path to the attack (MEPA) in mobile ad hoc network (MANET)." Sixth International Conference on Networking (ICN'07), 2007. pp. 16-16 https://ieeexplore.ieee.org/document/4196209
- Sandhya Khurana, Neelima Gupta, Nagender Aneja "Reliable ad-hoc on-demand distance vector routing protocol." International Conference on Networking, International Conference on Systems and International Conference on Mobile Communications and Learning Technologies (ICNICONSMCL'06), 2006. pp. 98–98 https://ieeexplore.ieee.org/document/1628344

Publications for IEEE Internet Initiative

- 1. Prasad Mantri, Mohammed Aledhari, Helen Hicks, Rajesh Nighot, Nagender Aneja, Sukanya Mandal, Ali Bashir, Jay Wack, Jared Bielby "Options and Challenges in Providing Universal Access." IEEE Internet Technology Policy Community White Paper, 2018. https://internetinitiative.ieee.org
- Mohammed Aledhari, Sukanya Mandal, Nagender Aneja, Mikael Dautrey, Rajesh Nighot, Prasad Mantri, Jared Bielby "Protecting Internet Traffic: Security Challenges and Solutions." IEEE Internet Technology Policy Community White Paper, 2017. https://standards.ieee.org
- 3. G Corser, G Fink, J Bielby "Internet of Things (IoT) Security Best Practices." IEEE Internet Technology Policy Community; White Paper, 2017. https://standards.ieee.org
- 4. Helen Hicks, Rajesh Nighot, Nagender Aneja, Mohammed Aledhari, Ali Bashir, Jared Bielby "Options and Challenges in Providing Universal Access to the Internet (Part 1)." IEEE, 2016. https://internetinitiative.ieee.org
- Book
- 1. Pawan Whig, Pavika Sharma, Nagender Aneja, Ahmed Elngar, Nuno Silva, Book on Artificial Intelligence and Machine Learning for Sustainable Development: Innovations, Challenges, and Applications, 2024. https://doi.org/10.1201/9781003497189

Book Chapters

1. Sandhya Aneja, Nagender Aneja "Security and Privacy: Challenges and Defending Solutions for NoSQL Data Stores." NoSQL: Database for Storage and Retrieval of Data in Cloud, 2017. pp. 237–250 https://www.taylorfrancis.com

Other Scholarly Publications

 Amit Jaiswal, Ivan Panshin, Dimitrij Shulkin, Nagender Aneja, Samuel Abramov "Semi-supervised learning for cancer detection of lymph node metastases." arXiv preprint arXiv:1906.09587, 2019. https://arxiv. org/pdf/1906.09587.pdf