NagarjunE

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Carrier Objective

To be associated with a progressive organization which can provide me with a dynamic work sphere to extract my inherent skills, which will enable me to develop my attitude to organization's objective also to further my career in the process. Eventually I would like to be one of the best professional in your organization.

Education

Master of Engineering in Web Technologies — *KR Circle, Bengaluru*
University Visvesvarayya College of Engineering(Bangalore University) — *2017 – 2019*
Percentage: 85.63

Bachelor of Engineering in Computer Science — *Hebbal, Bengaluru*
Atria Institute of Technology(VTU) — *2012 – 2016*
Percentage: 68.20

Diploma in Information Science and Technology — *Vignannagar, Bengaluru*
SCT Polytechnic(DTE) — *2007 – 2012*
Percentage: 60.83

Pre-University College in HEPS — *Kodighehally, Bengaluru*
Govt PU College(Karnataka PU Board) — *2012*
Percentage: 49.83

SSLC — *Hebbal, Bengaluru*
Ashraya High School(KSEEB) — *2007*
Percentage: 62.56

Certification

Complete Python Bootcamp: Go from zero to hero in Python 3, Udemy, Online Course on Oct.7,2019
Complete Data Science Bootcamp: Udemy, Online Course, ongoing

Skills

Programming Languages: C, C++, Java, HTML, CSS, Python
Frameworks: Django
Database: MySQL
Operating System: DOS, Windows 10, Ubuntu
Middleware: Apache Tomacat
Servers: Xamp, Wamp
Languages: Kannada, English, Hindi, Telugu
Simulation Tools: NS2, ONE
Editing Tools: Photoshop CC-17, CS6, Adobe Premier Pro, After Effects

Areas of Interest

- Internet of Things

- Opportunistic Networks, Delay Torrent Networks, Wireless Sensor Networks
- Raspberry Pi Systems
- Web Technologies
- UI/UX Developer

Strengths

- Hard Worker
- Problem Solver
- Positive Thinking
- Patience
- Good Team Member

Projects

1. ***HMCRA: Hybrid Multi-Copy Routing Algorithm for Opportunistic IoT Network***
   Opportunistic networks don't have a pre-established route between nodes hence, nodes have to collect characteristics of IoT network like location of the neighboring nodes and network topology dynamically. This dynamic characteristics poses challenge for routing of data opportunistic IoT network. Hence, Hybrid Multi-Copy Routing Algorithm (HMCRA) is propounded, which classifies potential nodes based on optimal values exhibited by the nodes with respect to energy, speed and distance using fuzzy logic. Genetic Algorithm (GA) is used in fusion with fuzzy logic to form hybrid algorithm in order to obtain optimal route with lesser hop count. The simulation results delineate that the proposed HMCRA algorithm outperforms with respect to delivery probability, hop count, overhead ratio and latency in par with similar multi-copy routing algorithms. The uniqueness of this paper lies in selecting potential nodes and to find optimal path by applying fuzzy logic and GA.
   Tools used: ONE Simulator, ***IDE***: Eclipse, ***Lauguage***: Java
2. ***EASM: Energy-Aware Sink Mobility Algorithm to Prolong Network Lifetime in WSN***
   Traffic from all over the sensor network is forwarded to the sink, which leads to quicker energy dissipation for the nodes around the sink compared to other sensor nodes deployed away from the sink which results in energy hole problem. The aim of this work is to collect data from all sensor nodes, aggregate and forward to cloud. WSN is logically divided into subgrids and each it is uniquely identified and number of sensor under each subgrid is known to the sink. During the data aggregation process, the mobile sink move towards the potential subgrid so that the energy of all the sensor nodes is equally utilised. It is implemented through reconstructing the network and creating new routing paths in the network. The sink node moves to a new safe location, neighboring nodes having more residual energy when sink current neighboring node's residual energy reaches threshold level. Heading towards a new location, the sink gets associated with new neighbor nodes having adequate residual energy, which prolongs the network lifetime
   Tools used, Lauguage: MATLAB
3. ***Lifetime Maximization of IoT Network by Optimizing Routing Energy***
   The Internet of Things(IoT)is considered as evolved form of Internet in the present scenario. Due to the prediction that large amount of data could be generated by billions

of devices connecting to the Internet, requires data to be routed and processed rapidly by harnessing IoT devices energy. Energy constraint IoT devices consumes more energy due to mobility of nodes and results in minimizing network lifetime. Motivated by this challenge, mobility aware weighted clustering algorithm (MAWCA) for maximizing IoT network lifetime by harnessing routing energy is proposed in this paper to find the optimal cluster head (CH) for mobile nodes in IoT network. MAWCA considers degree difference of the node, sum of differences between neighbors, cumulative time, nodes mobility and delay in choosing a CH as weighting factor during CH election process.
Tools used : NS2 Simulator, ***Lauguage***: C++

*Co*nference Publications

- Hemanth Kumar, Nagarjun E and S.M. Dilip Kumar, **"EASM: Energy-Aware Sink Mobility Algorithm to Prolong Network Lifetime in WSN"**, *I IEEE India Council International Conference (INDICON 2019)*, Dec 2019. (To be published in IEEE *Xplore*)
- Srinidhi NN, Nagarjun E and S.M. Dilip Kumar, **"HMCRA: Hybrid Multi-Copy Routing Algorithm for Opportunistic IoT Network"**, *International Conference on Smart Systems and Inventive Technology (ICSSIT 2019)*, Nov 2019. (To be published in IEEE *Xplore*, ISBN: 978-1-7281-2118-5).
- Srinidhi N N, Sunitha G P, Nagarjun E, Shreyas J and Dilip Kumar S M, **"Lifetime Maximization of IoT Network by Optimizing Routing Energy"**, *IEEE international Women in Engineering (WIE) Conference on Electrical and Computer Engineering 2019 (IEEE WIECON-ECE)*, Nov 2019. (To be published in IEEE *Xplore*, ISBN: 978-1-7281-4499-3).

*Jo*urnal Publications

- Srinidhi NN, Nagarjun E and S.M. Dilip Kumar, **" Hybrid Algorithm for Selecting Efficient Node and Path for Opportunistic IoT Network"**,*Journal, submitted to International Journal on Emerging Technologies.*
- Srinidhi NN, Nagarjun E and S.M. Dilip Kumar, **" Establishing Self-Healing and Seamless Connectivity among IoT networks using Kalman Filter"**, *Journal in progress.*

*Bo*oks

- Nagarjun E,**"Nagarjun's Quotes: For Life"**, *Sold by: Amazon Asia-Pacific Holdings Private Limited,* ***Language:*** *Kannada and English,* ***ASIN:*** *B07ZRKBYW2,* ***Format:*** *Kindle Edition and Paperback* ***ISBN-10:*** *1703900170,* ***ISBN-13:*** *978-1703900170*, October 30, 2019 (Published).

*Pr*esentations

- HMCRA: Hybrid Multi-Copy Routing Algorithm for Opportunistic IoT Network, *International Conference on Smart Systems and Inventive Technology (ICSSIT 2019)* organised by Francis Xavier Engineering College during 27 - 29, Nov 2019 at Tirunelveli, India
- Lifetime Maximization of IoT Network by Optimizing Routing Energy, *IEEE international Women in Engineering (WIE) Conference on Electrical and Computer Engineering 2019 (IEEE WIECON-ECE)* in collaboration with IEEE Bangladesh Section and WIE AG Bangladesh Section, 15 - 16, Nov 2019 at Sterlings Mac Hotel, Bengaluru.

*Wo*rkshops attended

- Participated in One-Week workshop on Block chain Technology 26 - 30 August, 2019.
- Participated in One-Week Faculty Development Programme on Artificial Intelligence and Machine Learning Feb-28 - March 07,2019.
- Participated in One-Week Faculty Development Programme on Internet of Things and Big Data Analytics 24 - 30 July,2019.
- Participated in the Personality Development Workshop conducted by Disha at UVCE.

*Ac*hievements & Extra-Curricular Activities

- Worked as an Associate Director For a Kannada Movie(Birth).
- Received Rajyapuraskar Award in Scout and Guides.
- Participated in Mad acts competition and bagged 2nd prize(Atria Institute of technology)
- Volunteered during the One Day Workshop on Systematic Voters Education and Electoral Participation for Differently abled Youth, 09th April 2019
- Participated in Kagathon as a part of Kagada 2018 conducted by IEEE UVCE.
- Volunteered during Release of Special Postal Cover on the Occasion of Centennial Celebrations of UVCE.
- Volunteered during the Second Talent Search Award Program at NIAS, IISC Bengaluru.
- Designed Banners and Certificates for College Functions.
- Director for Kannada Web-Series called ”Nagisuva Tonic ” and also worked as Cinematographer and Editor for Two Short-Movies.