Tathagata Mukherjee

Assistant Professor
Department of Computer Science
The University of Alabama in Huntsville
Huntsville AL

Education

- **Ph.D (Computer Science)**, Florida State University, Fall 2016 (GPA 4.0/4.0)
- **M.S (Computer Science)**, Florida State University, Summer 2014 (GPA 4.0/4.0)
- **B.S (Honors in Statistics) First in First Class in Statistics**, University of Kalyani, 2000

Research Interests

- Cyber Security
- Digital & Mobile Forensics
- Computer Security & Hacking
- Cyber Law & Organized Cybercrime
- Machine Learning (Specially interested in applications to Cognitive Radio & RADAR, Networked Systems for Highly Contested Environments, Mobile & Digital Forensics and Cybersecurity, Adversarial Learning)
- GPS Denied Positioning, Navigation & Timing (PNT)
- Quantum Computing & Applications
- Deep Learning & Approximations
- Optimization problems in Machine Learning & Data Analytics
- Combinatorial Optimization (primarily Graph Theory)
- Applied Problems in Computational Geometry
- Approximation Algorithms & Hardness of approximation

Professional Memberships

- Member IEEE
- Member ACM
- Member SIAM
- Member, IFIP Working Group 11.9 on Digital Forensics
- Member, The American Society of Digital Forensics & eDiscovery
- Invited Member, Upsilon Pi Epsilon Honor Society
- Invited Member, Phi Kappa Phi Honor Society
- Invited Member, Golden Key International Honor Society

Employment History

- Assistant Professor (Cybersecurity and Computer Science), Department of Computer Science, The University of Alabama in Huntsville (August 2018 - present)
- Courtesy Faculty, Department of Computer Science, Florida State University (2017 - present)
- CEO & Chief Scientist, Intelligent Robotics Inc. (a non-profit research lab & an Air Force Research Labs in-house contractor) (January 2017 - August 2018)
- Chief Scientist, Intelligent Robotics inc. (a non-profit research lab & an Air Force Research Labs in-house contractor) (October 2016 - August 2018)
- Research Intern, UF-REEF, Air Force Research Labs, Shalimar, Florida, (2016,2015,2014,2013)
- Teaching and Research Assistant, Department of Computer Science, Florida State University, Tallahassee, Florida, 2009 - May 2015
- Research Assistant, Department of Computer Science Florida Institute of Technology, Melbourne, Florida, August 2008 - December 2008
- Application Engineer, Oracle R&D, India, November 2006 - December 2007
- Senior Java Programmer, Cognizant Technology Solutions, April 2005 - October 2006 and December 2007 till April 2008
- Lecturer, Department of Computer Science, New Alipore College, Kolkata from July 2004 till December 2004
- Research intern, Indian Statistical Institute, Kolkata in the Machine Intelligence Unit under Prof. C.A. Murthy, May 2003 - May 2004

Awards & Achievements

- **First in First Class (University Topper in Statistics(Honors))** University of Kalyani
- **Recipient of S.B. Dasgupta memorial award for excellence in Statistics** from the University of Kalyani, from Honorable Governor of West Bengal, Mr. Viren.J.Shah
- Selected through **GATE (2005)** for Pursuing Master's at IIT, **DRDO SET (2007) Scientist Selection Examination for Defense Research and Development Organization, India**
- **Continuously** supported by Teaching & Research Assistant-ships for graduate (MS & PHD) studies @ Florida State University
- **Honorable Mention** South East ACM Regional Programming Contest 2010
- **Best Teaching Assistant Award** Florida State University 2010, 2014
- **Best Poster Presentation Award** at Computer Science Expo, Florida State University, 2014
- Nominated for Outstanding Teaching Assistant Award, Florida State University, Spring 2015
- **Captive Eyes Big Data Fellowship**, Summer 2016
- **Captive Eyes Big Data Fellowship**, Fall 2016
- **BEST Paper Runner-up IEEE International Performance Computing and Communications Conference 2018, Orlando FL**
- **Multiple Research Awards from National Science Foundation, National Institute of Justice and Air Force Research Laboratory, Munitions Directorate** (Please see below)

Peer Reviewed Publications

- **Published**

1. Muthukumaran Ramaburamanian, Chaity Banerjee, Debashri Roy, Eduardo Pasiliao Jr., **Tathagata Mukherjee** "Exploiting Spatio-Temporal Properties of I/Q Signal Data using 3D Convolution for RF Transmitter Identification" *Accepted: IEEE Journal of Radio Frequency Identification*
2. Sudhir Aggarwal, James Parsons, Shiva Housmand, **Tathagata Mukherjee** "An Empirical Study on Efficiency of a Dictionary Based Viterbi Algorithm for Word Segmentation" In Proceedings of IEEE BigData 2020
3. Nikita Susan Joseph, Chaity Banerjee Mukherjee, Eduardo Pasiliao Jr., **Tathagata Mukherjee** "FlightSense: A Spoofer Detection and Aircraft Identification System using Raw ADS-B Data" In Proceedings of IEEE BigData 2020
4. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee, Eduardo Pasiliao Jr. "Adaptive Streaming of HD and 360Videos over Software Defined Radios" *Journal of Pervasive and Mobile Computing, 2020*
5. Debashri Roy, **Tathagata Mukherjee**, Eduardo Pasiliao "Exploiting Spatio-temporal Correlation in RF Data using Deep Learning" *Book Chapter: Deep Learning Applications Volume 2*
6. Chaity Banerjee, **Tathagata Mukherjee**, Eduardo Pasiliao "The Multi-phase ReLU Activation Function" *In Proceedings of ACM Southeast (ACMSE) Conference 2020*
7. Vaidyanath Areyur Shanthakumar, Chaity Banerjee, Eduardo Pasiliao Jr., **Tathagata Mukherjee**, "Uncooperative Direction Finding with Neural Networks using I/Q Information" *Accepted International Conference on Information Systems & Data Mining 2020*
8. Chaity Banerjee, **Tathagata Mukherjee**, Eduardo Pasiliao Jr. "Feature Representations using the Reflected ReLU Activation" *In IEEE Journal of Big Data Mining & Analytics*
9. Vishal Perekadan, **Tathagata Mukherjee**, Chaity Banerjee, Eduardo Pasiliao Jr. "RF-MSiP: Radio Frequency Multi-Source Indoor Positioning with FM & GSM" *In Proceedings of IEEE Big Data Conference 2019*
10. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee, Erik Blasch, Eduardo Pasiliao "RFAL: Adversarial Learning for RF Transmitter Identification and Classification" *In IEEE Transactions on Cognitive Communications and Networking*
11. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee, Eduardo Pasiliao Jr. "RF Transmitter Fingerprinting Exploiting Spatio-temporal Properties in Raw Signal Data" *In Proceedings of IEEE International Conference of Machine Learning & Applications 2019*
12. Vishal Perekadan, **Tathagata Mukherjee**, Chaity Banerjee, Eduardo Pasiliao Jr. "RF-MSP: Radio Frequency Based Multi-Source Positioning in Indoor Environments" (Poster) *Annual Von Braun Symposium, American Astronautical Society, 2019*
13. Debashri Roy, Mainak Chatterjee, **Tathagata Mukherjee**, Eduardo Pasiliao Jr. "Primary User Activity Prediction in DSA Networks using Recurrent Structures" *In Proceedings of IEEE DySPAN 2019*
14. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee, Eduardo Pasiliao Jr. "Defense against PUE Attacks in DSA Networks using GAN based Learning" *In Proceedings of IEEE Globecom 2019*
15. **Tathagata Mukherjee**, Piyush Kumar, Debdeep Pati, Erik Blasch, Eduardo Pasiliao, Liqin Xu. "LoSI: Large Scale Location Inference through FM Signal Integration and Estimation" *In IEEE Journal of Bigdata Mining and Analytics, May 2019*
16. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee "Machine Learning in Adversarial RF Environment" *In IEEE Communications, Accepted March 2019*

17. Chaity Banerjee, **Tathagata Mukherjee**, Eduardo Pasiliao "An Empirical Study on Generalizations of the ReLU Activation Function" *In Proceedings of ACM Southeast (ACMSE) Conference 2019*
18. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee, Eduardo Pasiliao Jr. "Detection of Rogue RF Transmitters using Generative Adversarial Nets" *In Proceedings of IEEE Wireless Communications and Networking Conference 2019*
19. Chaity Banerjee, **Tathagata Mukherjee**, Chad Lilian, Daniel Reasor, Xiuwen Liu and Eduardo Pasiliao "A Feature Selection Algorithm Using Neural Networks" *In Press International Journal of Machine Learning & Computing*
20. Sudhir Aggarwal, Gokila Dorai, Umit Karabiyik, **Tathagata Mukherjee**, Nicholas Guerra, Manuel Hernandez, James Parsons, Khushboo Rathi, Hongmei Chi, Temilola Aderibigbe, Rodney Wilson "Design and Implementation of a Targeted Data Extraction System for Mobile Devices" *Accepted Talk Fifteenth Annual IFIP WG 11.9 International Conference on Digital Forensics 2019, Orlando FL and Book Chapter in Advances in Digital Forensics*
21. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee, Eduardo Pasiliao Jr. "Adaptive Video Encoding and Channel Selection for Video Streaming over SDRs" *In Proceedings of 37^{th} IEEE International Performance Computing and Communications Conference 2018, Orlando FL*
22. Orhan Akal, **Tathagata Mukherjee**, Adrian Barbu, Jared Paquet, Kevin George, Eduardo Pasiliao Jr. "A Distributed Sensing Approach for Single Platform Image-based Localization" *In Proceedings of 17^{th} IEEE International Conference on Machine Learning & Applications 2018, Orlando FL*
23. Biswas Parajuli, Piyush Kumar, **Tathagata Mukherjee**, Sachin Jambawalikar, Eduardo Pasiliao Jr. "Fusion of Aerial Lidar and Images for Road Segmentation with Deep CNN" *In Proceedings of 26^{th} ACM Sigpatial International Conference on Advances in Geographic Information Systems 2018, Seattle, Washington*
24. Debashri Roy, **Tathagata Mukherjee**, Mainak Chatterjee, Eduardo Pasiliao "Detection of Rogue Transmitters in RFML System for Vehicular Networks using SDR." *POSTER in NEWSDR 2018 Boston MA*
25. **Tathagata Mukherjee**, Andreas Adolfson, Piyush Kumar, Eduardo Pasiliao, "Hierarchical Learning For FM Radio Based Aerial Localization Using RSSI." *2017 In Proceedings of GNU Radio Conference, Volume 2*
26. **Tathagata Mukherjee**, Michael Duckett, Piyush Kumar, Daniel Rodriguez, Jared Paquet, Mallory Haulcomb, Kevin George, Eduardo Pasiliao. "RSSI-Based Supervised Learning For Uncooperative Direction-Finding." *2017 In Joint European Conference on Machine Learning and Knowledge Discovery in Databases. pp 216-227*
27. **Tathagata Mukherjee**, Biswas Parajuli, Piyush Kumar, Eduardo Pasiliao. "TruthCore: Nonparametric Estimation of Truth from a Collection of Authoritative Sources." *2016 IEEE International Conference on Big Data. pp 976-983*
28. Piyush Kumar, **Tathagata Mukherjee**, Eduardo Pasiliao, Liqin Xu. "Cheap Approximate Localization Using FM Radio" *Proceedings of the 23rd SIGSPATIAL International Conference on Advances in Geographic Information Systems* **Authors sorted by last name**

- **Articles Under Review**

1. Debashri Roy, Alec Riden, Jared Paquet, Eduardo Pasiliao Jr., **Tathagata Mukherjee** "GANSAT: A System for Detection of GPS Spoofer using SATellite Constellation Fingerprinting and GAN Training" *In Preparation*

Patents

1. Method for Passive Approximate Localization using Frequency Modulation and Software Defined Radio (USPTO Patent Granted August 2018, Application Number 15276737)

2. Design and Implementation of a Targeted Data Extraction System for Mobile Forensics (Patent application filed with USPTO Docket Number 6624-06401, January 16, 2020)

3. Detection of Rogue Transmitters Using Generative Adversarial Networks (Provisional patent application has been filed)

Awards & Support

Current Support:

1. **Tathagata Mukherjee (UAH PI)**, Haeyong Chung (Co-PI), Award Amount **$575,000**, Title: AI Enabled Community Supervision for Criminal Justice Services, (Multi University, Total Award $ 1,999,778), Period: May 2020 to December 2024

2. **Tathagata Mukherjee (PI)** Assured Communication: Task Order 0050 Contracting agency: University of Florida (UFDSP00010851), Funding agency: AFRL (Contract Pending), Award Amount **$308,000**, Period: July 2020 to November 2021

3. **Tathagata Mukherjee (PI)**, Title: Modeling and Optimization of Networked Systems in Contested Environments, PTE Federal Award No: FA-8651-16-2-0009. Contracting agency: University of Central Florida, Funding agency: AFRL, Total Award Amount **$263,000**, Period: January 2019 to February 2021

4. **Tathagata Mukherjee (PI)** AFRL/RWWN, Title: Generalized Sparse Spanners for Robust and Reliable Routing Protocols, Award Amount **$ 150,000** Period: January 2019 to January 2022

Completed Support

1. **Tathagata Mukherjee (PI)** Assured Communication: Task Order 0050 Contracting agency: University of Florida (UFDSP00010851), Funding agency: AFRL, Award Amount **$775,629**

2. **Tathagata Mukherjee (PI)**, Title: Modeling and Optimization of Networked Systems in Contested Environments, PTE Federal Award No: FA-8651-16-2-0009, Funding Agency: AFRL, Award Amount: **$33,000**

3. **Tathagata Mukherjee (Co-PI)** Targeted Forensic data Extraction from Mobile Devices (PI: Dr. Sudhir Aggarwal, Florida State University, Funding agency: NIJ, Grant Number: NIJ-2016-8976, Award Amount **$541,232**

4. **Tathagata Mukherjee (PI)** Consensus Algorithms for Distributed Object Detection and Tracking Using RF and Vision (AFRL Subcontract), Total Award Amount **$ 80,000**

5. AFRL Research Award Spring 2016,2015,2014,2013

6. **Tathagata Mukherjee (Co-PI)** NSF ICorps Award: "Meeting Point:Eco-Smart Mobility Solutions", Total Award Amount **$ 50,000** (PI: Dr. Piyush Kumar)

Teaching Experience

- Graduate & Undergraduate Network Security (with Hacking for Defense) (Spring 2020 at UAH)
- Introduction to Quantum Computing & Applications (Special Topics) (Spring 2020 at UAH)
- Graduate & Undergraduate Mobile Digital Forensics (Fall 2019 at UAH)
- Graduate & Undergraduate Network Security (Fall 2019 at UAH)
- Malware Analysis (Special Topics) (Fall 2019 at UAH)

- Malware Analysis (Special Topics) (Summer 2019 at UAH)
- Graduate & Undergraduate Network Security (Spring 2019 at UAH)
- Graduate & Undergraduate Network Security (Fall 2018 at UAH)
- Design and Analysis of Algorithms (Taught this course 4 times with three different instructors: Drs. Piyush Kumar, Sudhir Aggarwal & Margareeta Ackerman), (Senior Undergraduate and Graduate level course at Florida State University)
- Application Development with Python, (Senior Undergraduate and Graduate level course at Florida State University)
- Graduate Level Data Communication and Computer Networks (Taught this course twice with two instructors: Drs Zhenghao Zhang & Sudhir Aggarwal at Florida State University)
- Advanced Algorithms (Graduate only) (with Dr. Piyush Kumar at Florida State University)
- Computer Literacy (Taught at Florida State University)

News Media Coverage

- FSU CS News
- The Herald
- Huntsville Times
- Alabama Media Group
- WHNT TV News
- WAFF TV News
- WAAY TV News
- WVTM NBC News
- UAH News Bytes

Synergistic Activities

- **Invited Conference & Journal Program Committees & Review**
  1. NSF review panelist 2021
  2. Reviewer for IEEE Transactions on Aerospace & Electronic Systems
  3. Reviewer for Pervasive and Mobile Computing 2019/2020/2021
  4. Program Committee for MOBILITY 2021
  5. Program Committee for SPACOMM 2021
  6. Program Committee for ACM Southeast Conference, 2021, Jacksonville, AL
  7. Program Committee for International Conference on Information Systems and Data Mining , 2021, Santa Clara, CA, USA
  8. Reviewer for National Science Foundation, USA
  9. Program Committee for 9th International Conference on Computational Data and Social Networks, 2020, Dallas, TX

10. Program Committee for 16th International Conference on Computational Intelligence and Security (CIS), 2020, Nanning, China
11. Reviewer Elsevier Computer Communications
12. Reviewer IEEE Transactions on Industrial Electronics
13. Reviewer Journal of Digital Forensics, Security and Law
14. Reviewer IEEE Transactions on Big Data
15. Technical Program Committee of The Fifteenth International Conference on Internet and Web Applications and Services (ICIW) 2020
16. Technical Program Committee of The Twelfth International Conference on Advanced Geographic Information Systems, Applications, and Services (GeoProcessing), 2020
17. Technical Program Committee of The Twelfth International Conference on Information, Process, and Knowledge Management (eKNOW), 2020
18. Technical Program Committee of 2^{nd} Wireless Sensors and Drones in Internet of Things (Wi-DroIT), 2020
19. Technical Program Committee of 4^{th} International Conference on Information Systems and Data Mining (ICISDM), 2020
20. Technical Program Committee of 21^{st} International Conference on Distributed Computing and Networking (ICDCN), 2020
21. Reviewer European Symposium of Algorithms (ESA), 2019
22. Technical Program Committee of 28^{th} International Conference on Computer Communications and Networks (ICCCN), 2019
23. Organizing Committee GNU Radio Conference (GrCon) 2019, Huntsville AL
24. Organizing Committee & Publicity Chair Wi-DroIT 2019, Greece
25. Organizer RFML Tutorial GNU Radio Conference (GrCon) 2018, Las Vegas
26. Co-Chair The 6^{th} Annual AFRL Mathematical Modeling and Optimization Institute Workshop
27. Editorial Board Member Knowledge Discovery & Data Mining Letters
28. Reviewer for Pervasive and Mobile Computing 2018
29. Reviewer for Energy Systems
30. Reviewer for HiPC 2017
31. Reviewer for Optimization Letters
32. Reviewer for IFIP 2015
33. Reviewer for IROS 2015
34. Reviewer for Transactions of Mobile Computing (TMC)

- **Academic Committees**

1. MS Thesis Committee **Chair** (Current) of Mr. Prasanna Koirala at The University of Alabama in Huntsville, Department of Computer Science
2. MS Thesis Committee **Chair** (Current) of Mr. Tharun Kumar at The University of Alabama in Huntsville, Department of Computer Science
3. MS Thesis Committee **Chair** (Current) of Mr. Arun John at The University of Alabama in Huntsville, Department of Computer Science
4. Ph.D Committee (Current) of Mr. Bishwas Praveen at The University of Alabama in Huntsville, Department of Computer Science
5. Ph.D Committee (Current) of Mr. Thomas de Witt at The University of Alabama in Huntsville, Department of Computer Science

6. MS Thesis Committee **Chair** (Graduated, Fall 2020) of Ms. Nikita Susan Joseph at The University of Alabama in Huntsville, Department of Computer Science
7. MS Thesis Committee (Graduated) of Mr. Jeren Suzuki at The University of Alabama in Huntsville, Department of Computer Science
8. MS Thesis Committee **Chair** (Graduated, Summer 2020) of Mr. Surya Vamsi Verma at The University of Alabama in Huntsville, Department of Computer Science
9. Ph.D Committee **Chair** (Current) of Mr. Vaidyanath Areyur Shanthakumar at The University of Alabama in Huntsville, Department of Computer Science
10. Ph.D Committee **Chair** (Current) of Mr. Muthukumaran Ramasubramanian at The University of Alabama in Huntsville, Department of Computer Science
11. Ph.D Committee (Graduated) of Mr. Khomsan Singhirunnusorn at The University of Alabama in Huntsville, Department of Computer Science
12. Ph.D Committee (Graduated) of Ms.Gokila Dorai at Florida State University, Department of Computer Science
13. MS Thesis Committee **Chair** (Graduated, Fall 2019) of Mr. Vishal Perekadan at The University of Alabama in Huntsville, Department of Computer Science
14. MS Thesis Committee (Graduated) of Mr. Bishwas Praveen at The University of Alabama in Huntsville, Department of Computer Science
15. MS Thesis Committee (Graduated) of Mr. Buddha Shrestha at The University of Alabama in Huntsville, Department of Computer Science
16. MS Project Committee (Graduated) of Mr. Manuel Hernandez at Florida State University, Department of Computer Science
17. MS Project Committee (Graduated) of Mr. James Parsons at Florida State University, Department of Computer Science
18. Proposal Evaluation Committee, Charger Innovation Fund 2019, The University of Alabama in Huntsville

- **Presentations & Talks**

1. "Connected Intelligent Battlefields: Challenges for the future war-fighter" *Invited Talk Huntsville Cyber Bytes August 2019*
2. "RF-MSiP: RF Based Multi Source Indoor Positioning" *Invited Talk at AFRL MMOI 2019*
3. "Distributed Image Based Localization" *Invited Talk at AFRL MMOI 2018*
4. "Targeted data Extraction from Mobile Devices." *Talk at Florida Department of Law Enforcement with Dr. Sudhir Aggarwal*
5. "Large Scale Localization Systems." *Invited Talk GNU Radio Conference 2017*
6. "Learning Based Direction Finding." *Invited Talk GNU Radio Conference 2017*
7. "TruthCore: Non-parametric Truth Finding." *Conference Presentation IEEE International Conference on Big Data 2016*
8. "Truth Finding." *Invited Talk 2016 Air Force Research Labs Mathematical Modeling & Optimization Institute*
9. "Cheap Approximate Localization Using FM." *Conference Presentation 23rd SIGSPATIAL International Conference on Advances in Geographic Information Systems*
10. "Average Distance Spanners." *Invited Talk 2015 Air Force Research Labs Mathematical Modeling & Optimization Institute*
11. "Feature Extraction from LiDAR." *Invited Talk 2013 Air Force Research Labs Mathematical Modeling & Optimization Institute*

- **Workshops Organized**

  1. Workshop of Mathematical Modeling and Optimization Institute at AFRL Eglin AFB (July 2017, July 2018 and July 2019)
  2. Workshop on Wireless Sensors and Drones in Internet of Things (Wi-DroIT) 2019
  3. Organized 3D Printing Workshops (Nov 2016, March 2017)
  4. Organized Workshop on Software Defined Radio jointly with Ettus Research (Nov 2016 @ FSU)
  5. Organized Workshop on Software Defined Radio jointly with Ettus Research (Nov 2016 @ AFRL)
  6. Organized Workshop on Computational Techniques In Materials Genomics (May 2016 @ AFRL)

- **Student Mentoring & Supervision**

  1. Nikita Susan Joseph (MS Graduated) (University of Alabama in Huntsville)
  2. Surya Vamsi Verma Sagi (MS Graduated) (University of Alabama in Huntsville)
  3. Vishal Perekadan (MS Graduated) (University of Alabama in Huntsville)
  4. Alec Riden (MS & Ph.D student) (University of Alabama in Huntsville)
  5. Prasanna Koirala (MS student) (University of Alabama in Huntsville)
  6. Tharun Kumar (MS student) (University of Alabama in Huntsville)
  7. Arun John (MS student) (University of Alabama in Huntsville)
  8. Muthukumaran Ramasubramanian (Ph.D student) (University of Alabama in Huntsville)
  9. Vaidyanath Areyur (Ph.D student) (University of Alabama in Huntsville)
  10. Gokila Dorai (Ph.D Mentoring (Graduated)) (Assistant Professor, Augusta University, GA, USA)
  11. Kevin George (research staff @ Intelligent Robotics (October 2016-December 2017))
  12. Andreas Adolfson (research intern @ Intelligent Robotics (May to Aug 2017)
  13. Orhan Akal (research intern @ AFRL (May to Aug 2017)
  14. Gaurav Sinha (MS Project with Dr. Piyush Kumar)
  15. Harish Chetty (MS Project with Dr. Piyush Kumar)
  16. Robert Griesmeyer (MS Thesis with Dr. Piyush Kumar)

- **Leadership Roles**

  1. Chief Scientist, Intelligent Robotics Inc.
  2. Setup SDRNet @ Lab Eglin Air Force Base, Shalimar, FL
  3. Supervising researcher in the Algorithms Group at Florida State University
  4. Have co-supervised one completed MS thesis and two MS projects at Florida State University
  5. Founding President of Bengali Student Association at Florida State University
  6. Founding President for Durga Puja Festival Student Committee at Florida State University (Durga Puja is one one of the largest festivals in India and the largest festival in Eastern India)

- **Community Service**

  1. Volunteer from Florida State University for caring for elderly people living at Westminster Oaks Retirement Home, Tallahassee, Florida
  2. Volunteer from Florida State University for Big Bend Homeless Coalition, Tallahassee, Florida
  3. Regularly support initiatives for improvement of Children's health through UNICEF