Mohammad Samin Yasar

2100 Jefferson Park Avenue, Charlottesville,Virginia 22903, USA
msy9an@virginia.edu • +1 (434) 422-2530 • https://www.linkedin.com/in/yasarsamin/

EDUCATION

University of Virginia, Charlottesville, Virginia, USA

- Ph.D. in Computer Engineering — Aug 2017 – May 2022 [Expected]
  - Cumulative GPA: 3.78/4.00

BRAC University, Dhaka, Bangladesh

- B.S. in Electrical and Electronic Engineering, minor in CS — Jan 2012 – Apr 2015
  - Cumulative GPA: 3.90 / 4.00

RESEARCH EXPERIENCE

Dependable Systems and Analytics, University of Virginia

- Graduate Research Assistant — Aug 2017 – Present
  - Transition detection in robotic assisted surgical tasks from kinematics data
  - Monitoring segments in surgery for adverse events
  - Automated detection and localization of adverse using vision based cues
  - Supervisor: Prof. Homa Alemzadeh

WORK EXPERIENCE

Graduate Teaching Assistant, University of Virginia — Jan 2019 – Present

- Grading assignments and exams, and conducting tutorial sessions

Assistant Manager, MGH Group — Sep 2015 – Aug 2017

- Understanding and forecasting market behavior for strategic investments

Undergraduate Teaching Assistant, BRAC University — May 2013 – Aug 2015

- Grading of homework and assignments of first and second year undergraduate theory courses

PUBLICATIONS

CONFERENCES

[1] **M. S.Yasar**, D. Evans and H. Alemzadeh , "Context-aware Monitoring in Robotic Surgery," *To appear in the International Symposium on Medical Robotics (ISMR), 2019.*, Atlanta, Georgia, USA, Apr 2019.

[2] **M. S.Yasar**, M. T. Rashid and M. K. Rhaman, "Digitization of the Entire Traffic System and Mitigation of the Ongoing Traffic Crisis Across Cities of Developing Nations," *IEEE TENCON 2015 - 2015 IEEE Region 10 Conference*, Macau, China Nov 2015.

[3] **M. S.Yasar** and M. T. Rashid, "Implementation of dynamic traffic light controllers using artificial neural networks to diminish traffic ordeals", *European Modelling Symposium*, Madrid, Spain Oct 2015.

AWARDS & SCHOLARSHIPS

- Second place in the ECE Graduate Student Research Poster competition. — Sep 2018
- Vice Chancellor's/Dean's List, BRAC University — 2012 – 2015
  For attaining a semester GPA of at least 3.7 (Dean's List) or 3.9 (Vice Chancellor's List)
- Daily Star Award for outstanding results in GCE A Levels — Apr 2012
  Recognition for attaining at least 3 A grades in GCE A Levels
- Merit Based Scholarship, BRAC University — Jan 2012– Apr 2015
  Awarded on the basis of outstanding performance in GCE O and A Levels
- Daily Star Award for outstanding results in GCE O Levels — Apr 2010
  Recognition for attaining at least 6 A grades in GCE O Levels

SKILLS & EXPERTISE

Machine Learning
- Tensorflow
- Scikit learn
- Pycharm

Robotics
- ROS
- Gazebo

Computer Vision/Image Processing
- OpenCV
- Matlab

Computer Skills
- Programming Languages: Python, Java, C, C++, VHDL Framework: LLVM, Pin
- Others: UNIX/Linux, BASH, Microsoft Word, Microsoft Excel, Microsoft PowerPoint,LaTeX

COURSES
- Deep Learning for Visual Recognition
- Statistical Learning and Graph Models
- Digital Image Processing
- Software Security
- Dependable Computing
- Computer Architecture and Design
- Advanced Embedded Systems
- Machine Learning

SELECTED PROJECTS
- Detection and Tracking of subject based on a template
  - Trained a discriminative classifier to detect between the subject and background based on HOG Features. Used sliding window approach to identify the object in other parts of the video
  - Code availability : https://github.com/MohammadYasar/ObjectTracking
- Intrusion Detection System for tele-operated surgery
  - Designing the pipeline for detecting the presence of an intruder in the robot network. The system is trained to distinguish between normal tele-operation and abnormal behavior by using leveraging on previously recorded data patterns Code availability : https://github.com/MohammadYasar/SWSecurity/
- Credit Card Fraud Detection
  - Using ensemble learning techniques to detect fraudulent transactions from a largely imbalanced dataset
  - Code availability: https://github.com/MohammadYasar/MachineLearningGenericInterface

---

REVIEWER EXTERNAL REVIEWER
- TENCON — Jul 2016
- DSN — Dec 2017, Dec 2018
- ICCPS — Nov 2018

LANGUAGES
- Bengali: Native language.
- English: Fluent (speaking, reading, writing).
- French: Speaking and Writing

INTERESTS Soccer, Video Games, Reading, Traveling

REFERENCES

- **Professor Homa Alemzadeh**
  Assistant Professor
  Department of Electrical and Computer Engineering, Department of Computer Science
  University of Virginia
  Olsson Hall 259, Charlottesville, Virginia 22904, USA
  ha4d@virginia.edu

- **Professor David Evans**
  Professor
  Department of Computer Science
  University of Virginia
  Rice Hall 507, Charlottesville, Virginia 22904, USA
  evans@virginia.edu
