

# Jakaria Rabbi



Jakaria Rabbi, Assistant Professor  
Department of CSE  
Khulna University of Engineering & Technology  
Bangladesh

**Homepage:** <http://www.kuet.ac.bd/cse/jakaria>

**Personal Website:** <http://www.jakariarabbi.com>

**Cell:** +880 1912818546

**E-mail:** [jakaria\\_rabbi@cse.kuet.ac.bd](mailto:jakaria_rabbi@cse.kuet.ac.bd)

[jakaria@ualberta.ca](mailto:jakaria@ualberta.ca)

[jakaria.rabbi@yahoo.com](mailto:jakaria.rabbi@yahoo.com)

**LinkedIn:**

<https://bd.linkedin.com/in/jakaria-rabbi>

**GitHub:** <https://github.com/Jakaria08>

**Research Interests** Machine Learning, Computer Vision, Remote Sensing, Data Science and Data Mining.

**Education** University of Alberta, Edmonton, Canada.

**M.Sc. in Computing Science, May 2020**

Khulna University of Engineering and Technology, Khulna, Bangladesh.

**B.Sc. in Computer Science and Engineering, September 2013**

**M. Sc. Thesis** *“Tiny Object Detection in Remote Sensing Images: End-to-End Super-Resolution and Object Detection with Deep Learning”*

**Supervisor:** Professor Dr. Nilanjan Ray, CS, University of Alberta

**B.Sc. Thesis** *“Incremental Aggregation Scheme Based on Extendible Multidimensional Arrays”*

**Supervisor:** Professor Dr. K.M. Azharul Hasan, CSE, KUET

**Academic Projects**

- Image super resolution and object detection using deep learning on satellite imagery (**Python, PyTorch**) (Project Related to Thesis)
- Interactive Image Segmentation using convolutional neural network (**Python, TensorFlow**) (Masters Course Project)
- Mental stress monitoring through individual’s smartphone sensor data (**Java, Android**) (Masters Course Project)
- Crime Analysis using Data Mining Techniques (**R**) (Masters Course Project)
- Design of a ray tracer (**C++**) (Masters Course Project)

**Technical Skills**

- **Language & Framework:** C, C++, JAVA, Python, R, PyTorch, TensorFlow
- **Database:** Oracle, MySQL
- **Simulation Tools & IDE:** Eclipse, MATLAB, Microsoft Visual Studio, Packet Tracer, PyCharm

**Professional Training & Course**

- **CCNA Instructors Training:** CISCO Networking Academy, AIUB
- **Training of Trainers (ToT):** Training course on Information Technology Engineers Examination (ITEE), BD-ITEC, Dhaka
- **CCNA Exploration:** CISCO Local Academy, KUET

<b>Honors &amp; Awards</b>	<ul style="list-style-type: none"> <li>• <b>AWS Machine Learning Scholarship</b> worth of 1000 USD by Amazon and Udacity</li> <li>• <b>Maintained Dean's List</b> in three consecutive year in recognition of excellent performance (<b>2010, 2011,2012</b>) (<b>KUET</b>)</li> <li>• <b>Technical Scholarship</b> in consecutive four years for maintaining decent result (<b>KUET</b>)</li> <li>• Positioned <b>third</b> in a programming contest arranged by <b>CSE Association (KUET)</b></li> <li>• Positioned <b>sixth</b> at Project Show (Inter-college) in <b>Notre Dame Science Fair (2007)</b> (<b>Notre Dame College</b>)</li> </ul>
<b>Contest Programming</b>	<ul style="list-style-type: none"> <li>▪ <b>Coordinator</b> of contest programming club which name is SGIPC, KUET</li> <li>▪ <b>Coach</b> of contest programming teams of KUET and regularly participate in International Collegiate Programming Contest (<b>ICPC</b>) and National Collegiate Programming Contest (<b>NCPC</b>)</li> <li>▪ Our team achieved <b>9<sup>th</sup></b> position in RUET NCPC 2015</li> </ul>
<b>Completed Online Courses</b>	<ul style="list-style-type: none"> <li>▪ <b>Deep Learning Specialization (5 Courses) (Coursera)</b></li> <li>▪ <b>Machine Learning -- Stanford University (Coursera)</b></li> <li>▪ <b>The Data Scientist's Toolbox -- Johns Hopkins University (Coursera)</b></li> <li>▪ <b>R Programming -- Johns Hopkins University (Coursera)</b></li> </ul>
<b>Courses in Masters</b>	<ul style="list-style-type: none"> <li>▪ Data Mining</li> <li>▪ Computer Graphics</li> <li>▪ Visual Recognition with Deep Learning</li> <li>▪ Internet of Things</li> </ul>
<b>Major Courses in Undergraduate</b>	<ul style="list-style-type: none"> <li>▪ Structured Programming, Discrete Mathematics, Digital Logic Design, Object Oriented Programming, Data Structure &amp; Algorithm, Algorithm Analysis &amp; Design, Mathematical Analysis, Software Engineering, Database Systems, Operating Systems, Compiler Design, Computer Networks, Artificial Intelligence, Machine Learning, Computer Graphics, Computer &amp; Network Security, Digital System Design</li> </ul>
<b>Professional Experiences</b>	<ul style="list-style-type: none"> <li>▪ <b>Assistant Professor, Department of Computer Science &amp; Engineering</b> Khulna University of Engineering and Technology (KUET) May 2017 – Present <b>Courses:</b> Computer Architecture, Data Structure &amp; Algorithms, Internet Programming, Software Engineering, Operating Systems, Digital System Design and Computer Graphics</li> <li>▪ <b>Cisco Instructor</b> Khulna University of Engineering and Technology (KUET) April 2015 – Present <b>Courses:</b> CCNA Exploration: 4 Course</li> <li>▪ <b>Master Trainer for ITEE</b> Information Technology Engineers Examination (ITEE). This Examination is governed by Information-Technology Promotion Agency (IPA), Japan. March 2014-Present</li> </ul>

**Responsibility:** Train the perspective examinee and take the ITEE examination.

- **Teaching Assistant, Department of Computing Science**  
University of Alberta  
September 2017 – April 2020  
**Course:** Introduction to Software Engineering
- **Summer Student Intern, Alberta Geological Survey, Alberta Energy Regulator**  
May 2019 – August 2019  
**Responsibility:** Developed a software (based on Python, OpenCV library, and TensorFlow object detection API) to label large satellite imagery, train, and test different deep learning models, and generate geolocation files and trained models (shapefiles) to use in ArcGIS software. The software is being used by AER for oil and gas activity monitoring.
- **Lecturer, Department of Computer Science & Engineering**  
Khulna University of Engineering and Technology (KUET)  
March 2014 – May 2017  
**Courses:** Computer Architecture, Data Structure & Algorithms, Internet Programming, Software Engineering, Operating Systems, Digital System Design and Computer Graphics
- **Software Engineer**  
Samsung R&D Institute Bangladesh  
September 2013 – January 2014  
**Responsibility:** Software Engineer at Software Engineering and Platform Team. Had to work on Tizen Operating system's core API for test case generation and application development with C++

**Professional  
Membership**

- Member of Institute of Engineers Bangladesh (**IEB**)

**Publications**

- **Rabbi, Jakaria**, et al. "*Small-Object Detection in Remote Sensing Images with End-to-End Edge-Enhanced GAN and Object Detector Network.*" Remote Sensing 12.9 (2020): 1432.
- Awal, Md Abdul, Md Shamimur Rahman, and **Jakaria Rabbi**. "*Detecting Abusive Comments in Discussion Threads Using Naïve Bayes.*" 2018 International Conference on Innovations in Science, Engineering and Technology (ICISSET). IEEE, 2018.
- Md. Abdul Awal, **Jakaria Rabbi**, Sk. Imran Hossain, M.M.A. Hashem, "*A Hybrid Approach to Plan Itinerary for Tourists*", 2016 5<sup>th</sup> International Conference on Informatics, Electronics & Vision (ICIEV), Dhaka, Bangladesh, May 13-14, 2016, pp. 219-223. doi: 10.1109/ICIEV.2016.7759999
- Md. Abdul Awal, **Jakaria Rabbi**, Sk. Imran Hossain, M.M.A. Hashem, "*Using Linear Regression to Forecast Future Trends in Crime of Bangladesh*", 2016 5<sup>th</sup>

International Conference on Informatics, Electronics & Vision (ICIEV), Dhaka, Bangladesh, May 13-14, 2016, pp. 333-338. doi: 10.1109/ICIEV.2016.7760021

- K. M. Azharul Hasan, **Jakaria Rabbi**, S. M. Masudul Ahsan, "*Incremental aggregation scheme based on Extendible Karnaugh Arrays*," 17th International Conference on Computer and Information Technology (ICCIT), 2014, Dhaka, 2014, pp. 105-109. doi: 10.1109/ICCITech.2014.7073125

## Reference

**Dr. Nilanjan Ray**  
**Professor**  
2-21 Athabasca Hall  
Department of Computing Science  
University of Alberta  
Edmonton, Alberta T6G2E8,  
Canada