

# A K M Shahariar Azad Rabby

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in shahariarrabby

👤 ShahariarRabby

🌐 <https://shahariarrabby.github.io>

Diligent Machine Learning & Deep Learning Engineer, experienced in creating advance analytics strategies using data & intelligent machine learning algorithms with creative interfaces. Mixed two years of academia in AI research & professional machine learning & data science experience. Passionate for social innovation that promotes human inventiveness.

## Employment History

- 2019 Oct – Current    📌 **Software Engineer-Machine Learning.** Apurba Technologies, Dhaka, Bangladesh.  
🌐 [apurba.com.bd](http://apurba.com.bd)
  - » Research & development of the Bangla OCR system.
  - » Working with team on design, development & integration of image processing.
  - » Improved OCR performance, optimizations & benchmark over 91%.
- 2019 Jan – Current    📌 **Lecturer,** Computer Science & Engineering, Daffodil International University, Dhaka, Bangladesh. (*Part-time position*). 🌐 [diu.edu.bd](http://diu.edu.bd)
  - » Deliver lectures & tutorials for Artificial Intelligence with lab (CSE 412, 413L).
  - » Develop & implement new methods of teaching to reflect changes in research.
- 2017 Oct – Current    📌 **Sr. Research Scientist (Computer Vision & AI Initiatives).** DIU NLP & Machine Learning Research Lab. 🌐 [nlp.daffodilvarsity.edu.bd](http://nlp.daffodilvarsity.edu.bd)
  - » Write, publish & present research in high-quality, peer-reviewed journals.
  - » Supervise more than 400 students' research activities, including projects.
- 2019 Apr – 2019 Oct    📌 **Developer-AI.** Genex Digital. Dhaka, Bangladesh. 🌐 [genex.digital](http://genex.digital)
  - » Integrated system with 4 chat applications, Chatlogy, Mira, Sarah & agent chat.
  - » Improved chatbot accuracy by 25%, Reduced processing time by 30%.

## Education

- 2018    📌 **B.Sc. in Computer Science & Engineering, Daffodil International University, Dhaka, Bangladesh.** 148 credits toward a Bachelor's degree in Computer Science and Engineering. Thesis title: *Ekush: Bangla Handwritten Character Data Repository for NLP Research.* 🔗
- 2014    📌 **HSC, Science, Cantonment College, Cumilla, Cumilla Cantonment, Bangladesh.**
- 2012    📌 **SSC, Science, Muslim Modern Academy, Dhaka Cantonment, Dhaka, Bangladesh.**

## Nanodegrees & Certificates

- 📌 Self Driving Car Engineer Nanodegree Program, Udacity.
- 📌 Deep Learning Nanodegree Program, Udacity.
- 📌 Computer Vision Nanodegree Program, Udacity.
- 📌 Deep Learning Specialization. [deeplearning.ai](https://deeplearning.ai), Coursera.
- 📌 Machine Learning Stanford Online, Coursera.
- 📌 TensorFlow in Practice Specialization. [deeplearning.ai](https://deeplearning.ai), Coursera.
- 📌 Learning How to Learn. McMaster University & University of San Diego, Coursera.
  - 🌐 Check more Nanodegrees & Certificates: [shahariarrabby.github.io/certification](https://shahariarrabby.github.io/certification)

## Projects

- 📌 Ekush, 🌐 [shahariarrabby.github.io/ekush](https://shahariarrabby.github.io/ekush)
  - » Largest dataset of handwritten Bangla characters & digits.
  - » 673,482 character instances & 242 character class
  - » 340,243 female & 333,239 male data.
  - » 4 caption per image, include a variety of the district, age group.

## Projects (continued)

- **Programming a Real Self-Driving Car** 📄 [github.com/ShahariarRabby/CarND\\_Capstone](https://github.com/ShahariarRabby/CarND_Capstone)
  - » Perception subsystem detects traffic lights & obstacles.
  - » Planning subsystem updates the waypoints & the associated target velocities.
  - » Control subsystem actuates the throttle, steering, & brake to navigate the waypoints with target velocity.
- **GYMX**, 📄 [gymxx.herokuapp.com](https://gymxx.herokuapp.com)
  - » Online gym management tool built with Laravel.
  - » Digitalized the system including online payment, task, chat & alert, etc.
- **ISHARA-LIPI** 📄 [isharalipi.sanzidscloud.com](https://isharalipi.sanzidscloud.com)
  - » First multipurpose characters & digits dataset for Bangla Sign Language(BdSL).
  - » 1,800 images of 36 classes.

## Selected Publications

- 1 Rabby, A. K. M. S. A., Haque, S., Islam, M. S., Abujar, S., & Hossain, S. A. (2019). Ekush: a multipurpose and multitype comprehensive database for online off-line bangla handwritten characters. In K. C. Santosh & R. S. Hegadi (Eds.), *Recent trends in image processing and pattern recognition* (pp. 149–158). Singapore: Springer Singapore.
- 2 Rabby, A. S. A., Haque, S., Abujar, S., & Hossain, S. A. (2018). Ekushnet: using convolutional neural network for bangla handwritten recognition. *Procedia Computer Science*, 143, 603–610. 8th International Conference on Advances in Computing & Communications (ICACC-2018).
- 3 Rabby, A. S. A., Haque, S., Shahinoor, S. A., Abujar, S., & Hossain, S. A. (2018). A universal way to collect and process handwritten data for any language. *Procedia Computer Science*, 143, 502–509. 8th International Conference on Advances in Computing & Communications (ICACC-2018).
- 4 Sanzidul, I., Mousumi, S. S. S., Jessan, N. A., Rabby, A. K. M. S. A., & Hossain, S. A. (2018). Ishara-lipi: the first complete multipurposeopen access dataset of isolated characters for bangla sign language. In *2018 international conference on bangla speech and language processing (icbslp)* (pp. 1–4).

Read more publications here: 📄 [shahariarrabby.github.io/publication](https://shahariarrabby.github.io/publication) or 🎓 Google Scholar

## Skills

- Coding ■ Python, C, PHP, SQL, HTML, CSS, SASS, JavaScript, L<sup>A</sup>T<sub>E</sub>X.
- Framework ■ Keras, Tensorflow, Pytorch, Laravel, Django, Wordpress.
- Tools ■ Git & Github, Linux, Bash.
- Misc. ■ Research, teaching, training, consultation, Morse Code.
- Languages ■ Strong reading, writing & speaking competencies for Bangla and English.

## Awards & Achievements

- **IBM-Centre of Excellence**, *Developed a Minimum Viable Product (MVP)*, To Build a ChatBot Using IBM Watson. (Mentored by IBM).
- **Best Paper Awards**, For *Bangla Handwritten Digit Recognition using Convolutional Neural Network & Ekush: A Multipurpose and Multitype Comprehensive Database for Online Off-line Bangla Handwritten Character*.
- **1st Runner Up**, 1st runner up on 3-minute pitching competition at *2nd Symposium on Bangla Computational Linguistics (SBCL)*, SUST, Sylhet.
- **Best Student Research Award (2018 & 2019)**, Department of Computer Science & Engineering, Daffodil International University, Dhaka, Bangladesh.
- **Conducting Workshops** about Machine Learning & Research in three different universities.
  - 📄 Check more Awards & Achievements: [shahariarrabby.github.io/achievement](https://shahariarrabby.github.io/achievement)