

# AKM Shahariar Azad Rabby

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## Career Objective

I am a diligent individual who is self-taught in Machine Learning and Deep Learning, have experiences in creating advance analytics strategy using data and building intelligent machine with creative interfaces & experiences. My experience is a mix of two years in academia doing research in AI, machine learning, and data science. I am passionate about social innovation & about multidisciplinary approaches. I believe no problem is beyond human inventiveness.

## Employment History

- 2019 May – Current 📌 **Asst. Developer-NLP**. Genex Digital. Level 12, Nitol Niloy Tower, Nikunjo 2 C/A, Dhaka 1229, Bangladesh. 🌐 <https://genex.digital>
- 2019 Jan – Current 📌 **Lecturer**, Computer Science and Engineering Department, Daffodil International University, Dhanmondi, Dhaka, Bangladesh. (Part-time position)
- 2017 Jan – Current 📌 **Program Director for Data Science and AI Initiatives** DIU NLP and Machine Learning Research Lab.

## Education

- 2018 📌 **B.Sc. (Engineering) Computer Science and Engineering**, Daffodil International University, Dhaka, Bangladesh.  
Thesis title: *EKUSH: Largest Bangla Handwritten Character Data Repository for NLP Research*.  
🌐 <https://shahariarrabby.github.io/ekush>
- 2014 📌 **HSC, Science**, Cantonment Collage Cumilla, Cumilla Cantonment, Cumilla, Bangladesh.
- 2012 📌 **SSC, Science**, Muslim Modern Academy, Dhaka Cantonment, Dhaka, Bangladesh.

## Projects

- 📌 **Ekush** the largest dataset of handwritten Bangla characters with 367,018 isolated handwritten characters written by 3086 unique writers which include verity of the district, age group and the equal number of male and female. 🌐 <https://shahariarrabby.github.io/ekush>
- 📌 **GYMX** an online gym management tool build with Laravel which build a bridge between gym customer and trainer. Also it digitalized the whole system by online payment, task, chat and alert etc. 🌐 <http://gymx.ga>
- 📌 **Hello-Doctor** is a web app to control patient prescription system where a doctor will suggest some generic medicine name and patient can view all medicine lists and price by clicking on the generic name. 🌐 <https://hello-doctor.herokuapp.com>
- 📌 **ISHARA-LIPI** is the first multipurpose comprehensive open access isolated characters and digits dataset for Bangla Sign Language(BdSL). 🌐 <https://isharalipi.sanzidscloud.com>

## Skills

Coding 📌 Python, C, PHP, SQL,  $\text{\LaTeX}$ .  
Web Dev 📌 HTML, CSS, SASS, JavaScript.

## Skills (continued)

Framework	■ Keras, Tensorflow, Pytorch, Laravel, Django, Wordpress.
Tools	■ Git & Github, Linux, Bash.
Design	■ Photoshop, Gimp, Adobe XD, Power Point, Prezi, MS Paint.
Misc.	■ Academic research, teaching, training, consultation, $\text{\LaTeX}$ typesetting and publishing, Morse Code.
Languages	■ Strong reading, writing and speaking competencies for Bangla and English.

## Research Publications

### Journal Articles

- 1 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). doi:<https://doi.org/10.1016/j.procs.2018.10.437>
- 2 Rabby, A. S. A., Haque, S., Islam, S., Abujar, S. & Hossain, S. A. (2018). Bornonet: Bangla handwritten characters recognition using convolutional neural network. *Procedia Computer Science*, 143, 528–535. 8th International Conference on Advances in Computing Communications (ICACC-2018). doi:<https://doi.org/10.1016/j.procs.2018.10.426>
- 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). doi:<https://doi.org/10.1016/j.procs.2018.10.423>
- 4 Sanzidul, I., Mousumi, S. S. S., Rabby, A. S. A., Hossain, S. A. & Abujar, S. (2018). A potent model to recognize bangla sign language digits using convolutional neural network. *Procedia Computer Science*, 143, 611–618. 8th International Conference on Advances in Computing Communications (ICACC-2018). doi:<https://doi.org/10.1016/j.procs.2018.10.438>

### Conference Proceedings

- 1 Masum, A. K. M., Talukder, M. A. I., Rabby, A. S. A. & Abujar, S. (Accepted, Will be presented soon). Abstractive method of text summarization with sequence to sequence rnns. In *2019 10th international conference on computing communication and networking technologies (icccnt)*.
- 2 Rabby, A. S. A., Abujar, S., Sadeka, H. & Hossain, S. A. (2019). Bangla handwritten digit recognition using convolutional neural network. In A. Abraham, P. Dutta, J. K. Mandal, A. Bhattacharya & S. Dutta (Eds.), *Emerging technologies in data mining and information security* (pp. 111–122). Singapore: Springer Singapore.
- 3 Rabby, A. S. A., Sadeka, H., Sanzidul Islam, M., Abujar, S. & Hossain, S. A. (2019). Ekush: A multipurpose and multitype comprehensive database for online off-line bangla handwritten characters. In K. Santosh, M. Hangarge & V. Bevilacqua (Eds.), *Recent trends in image processing and pattern recognition*. Singapore: Springer Singapore.
- 4 Sadeka, H., Rabby, A. S. A., Akter Laboni, M., Neehal, N. & Hossain, S. A. (2019). Exnet: Deep neural network for exercise pose detection. In K. Santosh, M. Hangarge & V. Bevilacqua (Eds.), *Recent trends in image processing and pattern recognition*. Singapore: Springer Singapore.
- 5 Sadeka, H., Rabby, A. S. A., Sanzidul Islam, M., Abujar, S. & Hossain, S. A. (2019). Shonkhanet: A dynamic routing for bangla handwritten digits recognition using capsule network. In K. Santosh, M. Hangarge & V. Bevilacqua (Eds.), *Recent trends in image processing and pattern recognition*. Singapore: Springer Singapore.

- 6 Sadeka, H., Shahinoor, S. A., Rabby, A. S. A., Abujar, S. & Hossain, S. A. (2019). Onkogan: Bangla handwritten digit generation with deep convolutional generative adversarial networks. In K. Santosh, M. Hangarge & V. Bevilacqua (Eds.), *Recent trends in image processing and pattern recognition*. Singapore: Springer Singapore.
- 7 Sanzidul Islam, M., Mousumi, S. S. S., Jessan, N. A., Rabby, A. S. A., Abujar, S. & Hossain, S. A. (2019). A simple and mighty arrowhead detection technique of bangla sign language characters with cnn. In K. Santosh, M. Hangarge & V. Bevilacqua (Eds.), *Recent trends in image processing and pattern recognition*. Singapore: Springer Singapore.
- 8 Sanzidul Islam, M., Sultana Sharmin Mousumi, S., Jessan, N. A., Shahariar Azad Rabby, A. & Akhter Hossain, S. (2018). Ishara-lipi: The first complete multipurpose open access dataset of isolated characters for bangla sign language. In *2018 international conference on bangla speech and language processing (icbslp)* (pp. 1–4). doi:10.1109/ICBSLP.2018.8554466

## Miscellaneous Experience

### Awards and Achievements

- **Best Paper Awards**, For *Bangla Handwritten Digit Recognition using Convolutional Neural Network*, IEMIS conference, University of Engineering and Management, Kolkata, India.
- **Best Paper Awards**, For *Ekush: A Multipurpose and Multitype Comprehensive Database for Online Off-line Bangla Handwritten Character*, rtip2r conference, Solapur University, Pune, India.
- **1st Runner UP**, 1st runner up on 3 minute pitching competition at *2nd Symposium on Bangla Computational Linguistics (SBCL)*, SUST, Sylhet.
- **Department Prize for Outstanding Research Contribution**, Department of Computer Science & Engineering, Daffodil International University, Dhaka, Bangladesh.
- **Business Communication Course**, Global Access Asia Program.
- **Conducting Workshop** about Machine Learning & Research in three different university.

### Certification

- **Deep Learning Specialization**. deeplearning.ai, Coursera.
- **Machine Learning** Stanford University, Coursera.
- **AI For Everyone**. deeplearning.ai, Coursera.
- **A Crash Course in Data Science**. Johns Hopkins University, Coursera.
- **Python 101**. IBM Cognitive Class.
- **Deep Learning with Tensor Flow**. IBM Cognitive Class.
- **Unpacking the Internet of Things (IoT)**. Udemy.
- **Adobe Illustrator: Mastering the Fundamentals**. Udemy.

## References

### Dr. Sayed Akhter Hossain

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Department of CSE  
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