ANANNA BISWAS

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GitHub: **https://github.com/anannabiswas**

Website: **https://anannabiswas.github.io/**
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RESEARCH INTEREST

- Signal Processing
- Machine Learning, Deep Learning
- Computational Neuroscience, Statistics
- Brain-Computer Interface, Neural Engineering
- Computer Vision, Biomedical Image Processing

EDUCATION

B.Sc. in Electronics and Communication Engineering   April 2015 – February 2019
Khulna University of Engineering and Technology (KUET)   Khulna, Bangladesh

- CGPA: 3.31/4.00

PROFESSIONAL EXPERIENCE

Research Engineer   September 2021 – March 2022
Advanced Intelligent Multidisciplinary Systems (AIMS) Lab, UIU   Dhaka Bangladesh

- Worked on a neuromarketing project:
  - Designed experiments, collected and analyzed EEG signals and eye tracking data from human subjects watching marketing stimuli and predicted their responses (preference, purchase intention, and attention) through Support Vector Machine (SVM) classifier.

Research Assistant   August 2019 – August 2021
Brainekt-Computer Software Company   Dhaka, Bangladesh

- Writing research articles.
- Conducting research on following projects:
  - Wheelchair patient monitoring problem using EEG signals.
  - Anomaly detection of ECG signal by dot Residual LSTM Network.
- Working on the collaboration among independent researchers.

Operator   February 2018 – February 2019
Fabrication (FAB) Lab, KUET   Khulna, Bangladesh

- Organized workshop on "Laser Cutting & Engraving".
- Organized workshop on "cutting Edge Fabrication Facilities".
- **https://www2.kuet.ac.bd/fablab/operators-2018/**

PUBLICATIONS

- **Ananna Biswas,** Fazla Rabbi Mashrur, Khandoker Mahmudur Rahman, Mohammad Tohidul Islam Miya, Farhana Sarker, Khondaker A. Mamun, **An Overview of Neuromarketing Research in Developing Countries: Prospects and Challenges,** 2nd International Conference on Computing Advancements (ICCA) (2022).

- **Ananna Biswas**, Zabir Al Nazi, Tasnim Azad Abir, **Invasive Ductal Carcinoma Detection by A Gated Recurrent Unit Network with Self Attention,** International Conference on Electrical Information and Communication Technology (EICT) (2019).

- Zabir Al Nazi, **Ananna Biswas**, Md. Abu Rayhan, Tasnim Azad Abir, **Classification of ECG Signals by dot Residual LSTM Network with data augmentation for anomaly detection**, International Conference on Computer and Information Technology (ICCIT) (2019).

SKILLS

- Languages: Python, MATLAB, HTML, CSS, C++, C
- Framework/ Tools: EEGLAB, Keras, TensorFlow, scikit-learn, OpenCV, Pandas

- Paper writing: LaTex
- Data Analysis and Presentation: SQL, MS Excel, MS Word, MS Power Point
- IDEs: Jupyter Notebook, Spyder, Code Blocks.
- Operating Systems: Windows, Ubuntu, Linux

ONLINE COURSES AND TRAINING

- NMA Computational Neuroscience by neuromatch academy
  - Intro to Modeling
  - Machine learning
  - Dynamic Systems
  - Stochastic Process
- The BCI & Neurotechnology Spring School 2022 by g.tec medical engineering GmbH.
- Ada Lovelace DATATHON 2021 by HERWILL and BdOSN:
  - Descriptive Analysis
  - Feature Engineering
  - Machine learning Models
  - Validation and Evaluation
- Introduction to Python (**datacamp**)
- Intermediate Python (**datacamp**)
- Neural Networks and Deep Learning by deeplearning.ai (**Coursera**).
- Improving Deep Neural Networks: Hyper parameter Tuning, Regularization and Optimization by deeplearning.ai (**Coursera**).
- Fight Against COVID-19 Pandemic Using Machine Learning 2020 by IEEE CS BDC.
- Git for Developers Using GitHub by Coursera Project Network (**Coursera**).
- Speak English Professionally: In Person, online & On the Phone by Georgia Institute of Technology (**Coursera**).

UNDERGRADUATE COURSES

- Data Structure & Algorithms, Database System, Internet Programming, C Programming, Object Oriented Programming.
- Digital Image Processing, Digital Signal Processing.
- Numerical Analysis, Information Theory
- Computer Networks.

SCHOLARSHIP

- Shahjalal Islami Bank HSC Scholarship (Offered for poor & scholar Bangladeshi students)
- Higher Secondary School Certification (HSC) Scholarship (Offered by the Government of Bangladesh)
- Secondary School Certification (SSC) Scholarship (Offered by the Government of Bangladesh)

VOLUNTEER EXPERIENCE

- Publication Secretary, **MEC, KUET**. April 2018 – April 2019
- Treasurer, KUET Career Club (**KCC, KUET**). March 2018 – March 2019
- IT executive, KUET Unit Face of **ESAB** (**Engineering Students Association of Bangladesh**). July 2017 – July 2019
- Organizing committee member of Technival'18, **KUET** April 2018
- Organizing committee member of Career Carnival, **KUET** July 2017
- Organizing committee member of Robi Career Carnival, **KUET** August 2017

REFERENCES

- ❖ **Dr. A. B. M. Aowlad Hossain**, Professor(ECE), Khulna University of Engineering & Technology (KUET) Email:aowlad0403@ece.kuet.ac.bd

- ❖ **Dr. Md. Faruque Hossain**, Professor(ECE), Khulna University of Engineering & Technology (KUET) Email:fhossain97@yahoo.com