

ZABIR AL NAZI

Github:// [zabir-nabil](#) | LinkedIn:// [zanOnabil](#)

<https://zabir.info> | Google Scholar://[zabir](#) | ResearchGate://[zabir](#)

+ (880) 1726073965 | zabiralnazi@yahoo.com, zabir@vinndo.com

EDUCATION

B.Sc. in Electronics and Communication Engineering

Khulna University of Engineering and Technology

April 2015 - February 2019

CGPA: 3.50 / 4.00

Last Semester GPA: 3.81 / 4.00

Coursework: Data Structure and Algorithm, Database Management, Internet Programming, C Programming, Object Oriented Programming with C++, Digital Image Processing, Digital Signal Processing, Artificial Neural Network and Fuzzy Logic, Numerical Methods, Linear Algebra, Probability and Statistics, Multivariable Calculus, Computer Networks

Undergraduate Thesis: Deciphering Deep Convolutional Neural Networks for Medical Image Analysis, Classification of ECG signals by dot Residual LSTM Network with data augmentation for anomaly detection

WORK EXPERIENCE

Tappware Solutions Ltd. – Software Engineer (AI, ML)

March 2019 - Present

- developing a data-analytics tool for medical diagnostic data
- Bangla speech API, Computer Vision REST API
- Bangla OCR
- end2end real-time Bangla Speech Synthesis

ice9 Interactive – Research Intern

November 2017 - February 2018

- worked on imagery data mining with different API services
- other activities: using computer vision techniques to extract features from street view images, training ML models to classify and localize objects, designing dynamic maps etc.

MazeGeek BD – Intern, Research Assistant I

May 2018 – January 2019

- worked on VINNDO platform, designed web crawlers
- worked on deploying an ML model which can extract car features from images, localize car parts and automatic VIN detection system
- major project: Residual Net for Car Detection with spatial transformation (Accepted At ACM ICCA 2020)

ICT Division, BD – Project Director

December 2018 - Present

- implementing BCI-enabled wheelchair, cloud interface system
- ML/ Computer Vision assistance, Patient monitoring etc.

SKILLS

Fields	Algorithms and DS, Computer Vision, Data Science, Machine Learning, Embedded Systems, Robotics, Biomedical
Languages	Python, Matlab, GNU Octave, C++, C, Javascript, PHP, Java, C#, Go, R
Operating System	macOS, Ubuntu, Linux Mint, Raspbian, Cent OS, Windows
Frameworks / Tools	Keras, tensorflow, Flask, scikit-learn, OpenCV, Pandas, Bokeh, Jupyter Notebook, d3, PyTorch, Spyder, CodeBlocks, Unity, SQL, MongoDB, Tableau, Hadoop, Django

PUBLICATIONS

- [Automatic Skin Lesion Segmentation and Melanoma Detection: Transfer Learning approach with U-Net and DCNN-SVM](#), **International Joint Conference on Computational Intelligence 2018 (IJCCI 2018)**, Springer Nature [2018]

- Classification of Motor Imagery EEG Signals with multi-input Convolutional Neural Network by augmenting STFT, 5th **International Conference on Advances in Electrical Engineering (ICAEE)** [2019]
- Invasive Ductal Carcinoma Detection by Gated Recurrent Unit with Self Attention, 4th **International Conference on Electrical Information and Communication Technology** [2019]
- Residual Net for Car Detection with spatial transformation, **International Conference on Computing Advancements** [2019]
- Bangla Handwritten Digit Recognition Approach with an Ensemble of Deep Residual Networks, **International Conference on Bangla Speech and Language Processing** [2018]
- Motor Imagery EEG Signal Classification Using Random Subspace Ensemble Method, 7th **International Conference on Informatics, Electronics & Vision** [2018] {Accepted}
- Data Prediction in Distributed Sensor Networks using Adam-Bashforth-Moulton Method, **Journal of Sensor Technology** [2017]
- Motor Imagery EEG Classification using Random Subspace Ensemble Network with Variable Length Feature Sampling, **International Journal Bioautomation** [2018] {Submitted}
- Information Prediction in Sensor Networks Using Milne-Simpson's Scheme, **International Conference on Advances in Electrical Engineering (ICAEE)** [2017]
- Full Manuscripts and Details: <https://zabir.info/publications.html>

BOOK CHAPTERS

- **Springer Nature**: Proceedings of International Joint Conference on Computational Intelligence, Chapter 32: Automatic Skin Lesion Segmentation and Melanoma Detection: Transfer Learning Approach with U-Net and DCNN-SVM, **Springer Nature Singapore Pte Ltd.**

ACHIEVEMENTS

Winner, Innovation fund, ICT Division, Bangladesh Govt. (2018)

- Project BraiNect {Received research grant worth more than **USD \$6000** for developing my proposed research project from ICT Division, BD Govt.}

ACM International Collegiate Programming Contest, Dhaka Regional (2015, 2016, 2017)

- <https://icpc.baylor.edu/ICPCID/BIKBO2UHPKON>

Ignition 2018: National Mechanical Festival

- **Champion**, Matlab Programming Contest

Technical Scholarship from University for maintaining excellent academic result (2015, 2016, 2017, 2018)

Hult Prize: Hult Prize on Campus

- **Finalist**, Project Riddhi (Blockchain inspired micro-garments start-up)

NCPC (National Collegiate Programming Contest) 2016: Top 30

IUPC (Inter University Programming Contest) 2016: Top 35

PROJECTS

- Classification of Motor Imagery EEG Signals with Random Subspace Ensemble Network with variable-length feature sampling
- Bangla Newspaper Article Classification with Bidirectional LSTM
- Deep Convolutional Network for Text to Speech Engine (A dc-tts implementation for Bangla Language with Transfer Learning)
- Bokshi Cloud Eco-system for Bangla NLP, Data Analysis, Vision, and Speech (Bangla OCR, Bangla Text to Speech Synthesis, Medical Symptom Analysis, Bangla Chat Bot, Vision)
- Human Activity Recognition with LSTM from Sparse Pose Representation
- Motion Analytics GUI Tool
- Residual Net for Car Detection with spatial transformation
- Autonomous driving system with Machine Learning in Matlab
- Flask RESTful API with DeepLab & YOLO
- Face detection on Raspberry PI with Siamese Network
- picast: A lightweight fast data streaming library for raspberry pi in python
- PyEmotivCortexv2

- All Projects Descriptions/Prototypes: <https://zabir.info/projects.html>

DATA SCIENCE COMPETITIONS

> **Kaggle** - Numta, Bengali Handwritten Digit Recognition Challenge

- Top 15% · <https://www.kaggle.com/furcifer>

> **Kaggle** - Quora Insincere Questions Classification: Detect toxic content to improve online conversations

- Top 35% · <https://www.kaggle.com/furcifer>

VOLUNTEER EXPERIENCE

- Secretary, **IEEE KUET Student Branch**
- Algorithmic Problem Setter, **CodeAssign** (start-up focused on OJ, based on Croatia)
- Software Team Lead, **KUET Rover Makers** (KUET Robotics Team, International Rover Challenge)
- Intro Python Instructor, **Fab Lab KUET**
- Technical organizer, **TechNival** (Manipulators of Electrons Club, KUET)
- Founder & Fellow Member, **IRAS** (Innovation and Research Association for Students, KUET)
- General Secretary, **SGIPC** (club of competitive programming community at KUET)

OTHERS

- **National BACS Programming Camp 2017**, Khulna Region (got invitation, participated), National Round **2017** (got invitation, participated)
- Mentor, **Trail & Error: Introductory Robotics Workshop** arranged by **KUET Makers Hub**
- Mentor, **Introductory Robotics Workshop** arranged by **Manipulators of Electrons Club, KUET**
- Mentor, **Making Intelligent Robots** arranged by **KUET Robonic (Robotics Club, KUET)**
- **Facebook Hacker Cup** Round 2 (2016, 2017)
- **HackerRank** (Algorithmic Problem Solving) : 2 bronze, 2 silver <https://www.hackerrank.com/Furcifer>
- **Kattis** (Algorithmic Problem Solving) : <https://open.kattis.com/countries/BGD>
- **Codechef** (Algorithmic Problem Solving) : Max Rating **1966 (Purple)** <https://www.codechef.com/users/nabil1997>
- **LightOJ** (Algorithmic Problem Solving) (179 solutions)