MD SHAH IMRAN SHOVON

• Graduate Research Assitant, University of Florida • shah-imran.github.io • Gainesville, Florida

EDUCATION

Ph.D. in Electrical & Computer Engineering (Ongoing)

Graduated 2025 - Present

University of Florida, Gainesville, Florida

CGPA: 4.00/4.00 (3.27 in Last Two Semesters)

Total Credits:6

B.Sc. in Electrical & Electronic Engineering

2020

Shahjalal University of Science and Technology, Sylhet, Bangladesh

RESEARCH INTEREST

• Computer Vision, Generative Adversarial Networks, Adversarial Machine Learning, Automated Machine Learning

TEST SCORES

• IELTS – Overall Score 7.0 (Listening-7.5, Reading-7.0, Writing-6.0, Speaking-7.5)

PUBLICATION

- WaveFormer: A 3D Transformer with Wavelet-Driven Feature Representation for Efficient Medical Image Segmentation [Link]
- Evaluating YOLO Object Detection Models Under Adverse Lighting Conditions [Link]
- Evaluating and Enhancing Image Caption Generation: A Comparative Study of LSTM and GRU Models with Object and Feature Recognition Strategies [Link]

RESEARCH & PROJECTS

Machine Learning/Artificial Intelligence/Computer Vision Projects

2017 - Present

- Work in progress (for journal submission as first author): "Analyzing the Consequences of High-Intensity Light Yolov5 and Strategies for Defending Against Adversarial Attacks" GitHub
- Custom Object Detection and Tracking using Darknet (Darknet-yolo, Python) GitHub, Youtube
- Dataset Creation for Training Custom Yolo Model (Yolo, Linux Shell Scripting) Drive
- Auto Vehicle Entry Management for Apartment (OCR, Darknet-yolo, Python) GitHub
- Live Speed Detection of Vehicle (Darknet-yolo, Python) <u>GitHub, Youtube</u>
- Classification of Tweets from Twitter (Python, NLTK, Scikit-learn)

Academic Projects 2014 – 2020

Collaborated as a "Research Assistant" on three Official Projects supported by the UGC (University Grants Commission), leading the last two initiatives as Team Leader.

- Developing An Autonomous Underwater Vehicle & Navigation System (Arduino, Microcontroller)
- Automatic Attendance Taking with RFID (Python, Socket Programming, SQL)
- Developing An UGV and a Human Assistant (Python, Raspberry Pi, Socket Programming, Image Processing, Lidar)

Robotics & Electronics Projects

2014 - 2020

- Line Follower Robot with Automatic Collision Avoidance System
- · Maze & Grid Solver Robot
- · Remote Controlled Vehicle
- Auto Balancing Bot (Control System Project)
- DX Ball Game With Dot Matrix Display and Arduino (Microprocessor Project)
- · Egg Incubator

Software Projects

2017 - Present

Tradeshow Lead Scanning Website

- · Personal Trainer Website Video
- · Lead Mining Website
- · Smart Class Updates
- Scraping Application: Craiglist Scraper, Linkedin Scraper
- Automation Bot: Mass Email Marketing App(MVC), Auto SMS Sending Bot, Copy Assister App
- Desktop Application: Pi Camera Booth Controller with Python, Workout Generator for GYM Video

PROFESSIONAL EXPERIENCE

HowardMiller, Zeeland, USA: Full Stack Developer (Remote)

Oct 2021 - Present

- Al strategy development with Deep Learning for optimizing budget distribution in PPC campaigns (Tensorflow, Keras, Pandas, Scikit-Learn).
- Design and Develop new features, optimize the old ones, and integrate third-party API solutions(Flask, Django, Celery, Redis, Postgres, Linux, Gunicorn, Apache, AWS, Reactjs, API).

Gmonster.co, Balatonalmádi, Hungary: Project Lead (Remote)

Sep 2018 - Oct 2021

- Responsible for overseeing the whole development pipeline.
- Designed and Developed the whole product (Mass Email Marketing App) from scratch and the subscription system(Python, PyQt5, Database, Flask, Javascript, Linux Server).

EnableGeek, Dhaka, Bangladesh: Founder

Jun 2022 - Present

- Responsible for designing and overseeing the whole operation pipeline.
- Managing the Content Development team and the Tech team.

COURSE WORKS

Signal & Communication: Basic Communication Engineering, Signal and Linear Systems, Control System I, Optical Fiber Communication, Cellular Mobile and Satellite Communication and related lab courses.

Mathematics: Differential and Integral Calculus, Co-ordinate Geometry and Linear Algebra, Vector Analysis and Complex Variables, Ordinary and Partial Differential Equations.

Computer Science: Operating System, Introduction to Computer Language, Numerical Analysis, Digital Logic Design, Microprocessor and Interfacing and related lab courses.

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, C, Matlab, Processing, Arduino, JavaScript, Flutter, Dart, Assembly Language (8086)

Libraries: Scikit-learn, TensorFlow, Keras, PyTorch, YOLO, NumPy, SciPy, Pandas, Selenium, Requests, Beautifulsoup4, Scrapy, Matplotlib, Seaborn, Bokeh, Selenium, Requests, Beautifulsoup4, Scrapy, Django, Flask, React

Databases: SQL, Firebase, MongoDB, Pickle

Environments: Anaconda Environment, Jupyter Notebook

Analysis and Simulation: Matlab, Orcad PSpice, Power World, Microwind, Proteus Design Suite

TRAINING & EXTRA CURRICULAR ACTIVITIES

- Participated in 12 national Robotics competitions and been in Leader positions for most of them. Most of the competition was on Line Follower Robot, Maze and Grid Solver, Robo fights, etc. Also, I attended some Electronics Project fairs as well.
- Became 1st runner-up of Robomania, Esonance at IUT in 2015. It was a combination of Line following, Obstacle Avoidance, and a Remote Controlled Bot with hands to carry objects to designated places on challenging terrain.
- Top Up IT training on Java conducted by Ernst & Young LLP, India under the LICT project, and the program is certified by George Washington University, USA.
- Completed AWS Cloud Practitioner training course in 2020. Topics consisted of Analytics, Compute and Serverless, Containers, Database, Network and Content Delivery, Storage and Management, Monitoring, and Governance.
- Experience in teaching Maths, Physics, and Chemistry to high school students.

• Organizing member at EEE Fest-2018. Organized robotics competition policy and challenges.

LINGUISTIC PROFICIENCY

- English (Fluent)
- Bengali (Native language)