Saikat
Chakraborty

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in Saikat Chakraborty

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EDUCATION

Bachelor in Science (B.Sc.) in Electrical and Electronic Engineering (2024)

Khulna University of Engineering & Technology (KUET), Bangladesh

Department of Electrical and Electronic Engineering

CGPA: 3.30 out of 4.00

Higher Secondary School Certificate (2018)

Omar Gani M. E. S College, Chattogram

GPA: 5.00 out of 5.00

Secondary School Certificate (2016)

Chattogram City Corporation Municipal Model School and College, Chattogram

GPA: 5.00 out of 5.00

OVERVIEW

Aspiring electrical engineer with a keen interest in innovative design and programming. Proficient in electrical systems and a cybersecurity enthusiast.

LEADERSHIP EXPERIENCE

Lead - Team Hattima, The Case Gambit, EEE Day   2023

Primary Responsibilities:

- Detailed case analysis and maintaining collaboration among team members.
- Preparation of powerpoint presentation and Online Video Commercial related to the case.
- Overseeing progress and team communication over long distance through online platforms.

WORK EXPERIENCE

Telus International   2023

Search Engine Evaluator

- Working with the wider development team.
- Learning about search patterns at consumer level and assessing search content to ensure the best user experience.

ACHIEVEMENTS

Article Writing for EEE Day Magazine, Phonon   2023

Cybersecurity from an Industrial Standpoint, among the top 10 articles.

Industrial Attachments

- Industrial visits to power generation (Khulna 225 MW Combined Cycle Power Plant- NWPGCL (2023), Khulna 330 MW Dual Fuel Combined Cycle Power Plant - PDB (2023), Rampal 1320MW Super Thermal Power Plant (2024)) and transmission (230 kV Khulna South Grid Sub Station (2023)) plants.
- Industrial visit to Akij Jute Mills Limited, Khulna (2022).

SOFTWARE SKILLS

- Python
- AutoCAD
- MS Office
- Linux OS
- Adobe Premiere Pro
- MATLAB

LEADERSHIP SKILLS

- Public Speaking
- Team Management
- Event Management
- Empathy
- Agility and Adaptibility

ENGINEERING SKILLS

- Designing
- Programming
- Analytical Thinking
- Computer Networking
- R&D

PROJECT

Two Directional Inclinometer

Development of a novel and different approach to measure the inclination of a given platform. The project involved:

- Conceptualizing a electrolytic liquid level sensor to meet the specific requirements.
- Developing detailed CAD models using AutoCAD for accurate representation.
- Programming microcontrollers (Arduino) for monitoring orientation, transducing and displaying the measurements.
- Hacking a cheap but effective implementation using commercially available low cost materials such as table tennis balls.

THESIS

Singular Value Decomposition of Machine Speech

Application and verification of a unique separation algorithm for advanced speech signal analysis.

- Noise filtering and reconstruction of speech signal.
- Determination of the Vocal Tract Resonance of speech.
- Diagnosis of polyp in the vocal tract and other abnormalities.
- Development of a framework for continuous speech.

Bulk of the task was simulation based and was performed using the python programming language. The results suggested a robust and computationally efficient method for small natural speech signal analysis.

Implementation of Distant LED to Optical Camera Communication Using Different Coding and Organizational Schemes

A collaborative thesis targeting an improvement in Visible Light Communication (VLC) assessing the effects of various parameters on transfer characteristics, such as Bit Rate and Bit Error Rate.

- Impact analysis of camera technology, i.e., rolling shutter and global shutter.
- Study of variations due to coding schemes (i.e., Manchester) and redundancy.
- Analysis of the effects of LED matrix arrangement and image processing techniques.

Decoding the signal from the camera output is a rigorous image processing task and was performed using openCV in python. The transmitter LED matrix was controlled by Arduino microcontrollers that also perform encoding the data in different ways.

REFERENCES

Dr. Md. Mahbub Hasan
Professor, Dept. of EEE, KUET

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I hereby declare that the above information is true to the best of my knowledge and belief.

Saikat Chakraborty

Signature