

SAYAK GHORAI

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OBJECTIVE

To apply my skills in AI, Machine Learning, and systems engineering to develop innovative solutions and contribute to impactful projects in a dynamic and challenging environment.

EDUCATION

NIIT University, Neemrana

Aug 2021 - Current

Bachelor of Technology in Computer Science and Engineering

Cumulative GPA: 9.43

Relevant Coursework: Specialization in Artificial Intelligence

TECHNICAL SKILLS

- **Strong Areas:** Machine Learning, Deep Learning, Artificial Intelligence, Digital Image Processing, Computer Vision
- **Programming Languages:** Python, JavaScript, Java, C/C++ (Arduino)
- **Libraries/Frameworks:** TensorFlow, Keras, PyTorch, OpenCV, React.js, Node.js, Git
- **Database:** MongoDB, MySQL
- **Platforms:** Render, Vercel, Netlify, firebase, Kaggle, GitHub
- **Tools:** Labelbox, VS Code, IntelliJ, Google Collab, Asana, Trello, Google Analytics, Final Cut Pro, GarageBand

PROJECTS & RESEARCH EXPERIENCES

R&D on CNN based Human Face Emotion Detection

TensorFlow, Pandas, Scikit-learn, CNN

Classification model to detect human face emotions

- Explored Residual and Parallel connection blocks, different optimisation techniques and loss functions
- Achieved 63% accuracy on FER2013 and 68% accuracy on AffectNet dataset, using built from scratch model
- **Google Docs:** [Human Face Emotion Detection using Face Images](#)

Human Activity Recognition using Wi-Fi Channel State Information

WiFi-CSI, TensorFlow, Keras, CNN, LSTM

A project focuses on recognising human activity using Wi-Fi channel state information

- Used a readymade code for getting usual train test split, developed model architectures and done hyperparameter tuning
- Pushed the accuracy to 95% with good precision and recall, explored architectures like LSTM, learned fine tuning techniques
- **GitHub:** [sayakghorai34/HAR-using-CSI.git](#)
- **Kaggle Notebook:** [sayakghorai34/csi-har-notebook](#)

Implementation of DCGAN »

PyTorch, Matplotlib, DCGAN

Tried to implement the [DCGAN](#) from its Paper

- Implemented using PyTorch to understand PyTorch framework and GAN architectures.
- First Implemented on MNIST dataset, later implemented on CelebA dataset.
- **Kaggle 1:** <https://www.kaggle.com/code/sayakghorai34/dcgan-mnist>
- **Kaggle 2:** <https://www.kaggle.com/code/sayakghorai34/dcgan-rgb>

PeerMeet » <https://sg34-peermeet.netlify.app/>

React, Node.js, Express.js, VideoSDK

SDK based High Resolution Video Conferencing Application

- Zoom like video conferencing application with improved video quality, audio quality, and significantly less latency
- **GitHub:** [sayakghorai34/PeerMeet.git](#)

INTERNSHIP EXPERIENCES

Cats In Lab Coats Technologies (Startup)

Sep 2022 - Apr 2024

System Engineering and General Assistance Intern

NIIT University

- Developed ML based solution for object detection
- Contributed to assembling UAVs and Rover models for agriculture and defense purpose
- Experienced in remote UAV piloting and ground controlling during medium/large size experimental drone operations.

Center of Excellence in Education Technology

Aug - Nov 2023 & Jan - May 2024

Technology & Media Desk Teaching Assistant

NIIT University

- Helped to facilitate 150+ academic projects including 40+ industry linked projects
- Developed automations using APIs, and Python resulting into efficient project execution
- Organized a workshop on using project management tools like Asana, successfully attracting over 250 participants
- Created comprehensive documentation for project tools, detailing user instructions, potential issues, and solutions

CERTIFICATES

PCAP: Programming Essentials in Python » [view certificate](#)

7Apr, 2022