

Amrit Gaurav Rath

agr10@iitbbs.ac.in | [+91 94390-92128](tel:+919439092128) | [linkedin.com/in/amrit2104/](https://www.linkedin.com/in/amrit2104/) | github.com/amrit2104/

EDUCATION

Indian Institute of Technology Bhubaneswar

Dual Degree Specialization in Electrical Engineering, CGPA: 7.83/10.0

Bhubaneswar, Odisha

Aug. 2018 – May. 2023(Expected)

MP & EV English Medium School

Class XII, Score: 92%

Vishakapatnam, AP

Aug. 2016 – May. 2018

Saint Anne's School

Class X, Score: 93.67%

Titilagarh, Odisha

May. 2016

WORK EXPERIENCE

Research Intern

Supervisor: Dr. Dipankar De

May 2021 – July 2021

IIT Bhubaneswar

- * Developed a **Dual Active Bridge** based interface for a **Lithium-Ion Battery** Applications.
- * Designed the Voltage and Current **Controllers** for the battery for the generation of **Phase Shifts**.
- * Created the controllers for the AC grid to maintain the required **DC-Bus voltage**.
- * Successfully achieved **Bidirectional Power Flow** between a 48Ah battery and 3-phase 230V AC Grid.

Engineer Intern

Supervisor: Rajesh Kumar Adla

April 2020 – June 2020

Null Innovations, Hyderabad

- * Developed Websites for the company using **WordPress** for Frontend and **PHP & MySQL** for Backend.
- * Designed an **Artificial ChatBot** using custom chatbot from **Tidio** which would ping and reply to your messages.
- * Created a **payment portal** using **RazorPay** for direct online payments along with a contact form.
- * Implemented the **Yoast SEO** to improve the ranking of the Websites along with **Google Analytics**.

PROJECTS

Triple Active Bridge Based Interface for EVs(BTP) | MATLAB/Simulink

July 2021 – April 2022

- * Developed a high frequency three-port transformer for **Electric Vehicle** power management.
- * Designed the **Decoupling** for smooth power flow between ultra-capacitor, motor & battery.
- * Developed the inner phase shifts to decrease the **Harmonics** and prevent the **back-flow power**.
- * Created the modulating signals with required **phase shifts** for switching of the **H-bridges**.
- * Successfully achieved the required target of generating various **Charging and Discharging Profiles** for an EV.

Socio-Cult Fest Websites | HTML, CSS, PHP, JS, MySQL, Bootstrap

Aug 2019 – May 2021

- * Developed the **Main Registration Website** for Annual Socio-Cultural Fest 2021.
- * Deployed the websites on the online server using **CPanel**.
- * Designed and Managed the **Database** for Registrations using **MySQL and PHP**.
- * Other Major accomplishments includes Websites for Online Poetry Event, Annual Fashion Show Event and Registration website for Campus Ambassador Program.

Image to Text Converter Mobile Application | Python, Flutter

Jan 2021

- * Developed a **Flutter App** that will capture images and recognise text from it.
- * Trained a **Convolutional Neural Network** model to recognize hand-written characters, letters and numbers.
- * Used transfer learning methods on the pretrained **ResNet50** model of **Keras** and used **SGD** as optimizer & attained a test accuracy of nearly 92 percent.

Titanic- Machine Learning from Disaster | Python, Scikit-Learn, Seaborn

Oct. 2020

- * Used **Seaborn** to plot graphs to get a visual understanding of how the factors affected the survival rate.
- * Analyzed and Predicted the likelihood of **Survival of Passenger** on Titanic based on various factors.
- * Implemented various Machine Learning Models such as **Random Forest Classifier** and **Support Vector Machine**.

TECHNICAL SKILLS

Programming Languages:- C/C++, Python, Assembly Language(8085)

Web Development:- JavaScript, Bootstrap, HTML/CSS, PHP, MySQL

CS Fundamentals:- DSA, DBMS, OOPS

Python Packages:- Numpy, Pandas, Matplotlib, Scipy, Seaborn, Scikit-Learn

Frameworks:- Flutter, WordPress

Cloud Skills:- G-Cloud

Developer Tools:- VS Code, Android Studio, Sublime Text, MATLAB/Simulink, Jupyter Notebook

Adobe Designing Tools:- After Effects, Premiere Pro, Illustrator

ACHIEVEMENTS

- * Reached and Secured Global Rank **1680** in **Round-2** of **Facebook Hackercup 2021**.
- * Google **Kick Start 2022** Global Ranks(ID: amrit2104): Round-A: 2505, Round-B: 1313, Round-C: 2628.
- * Best Google **Kick Start 2021** Global Ranks(ID: amrit2104): Round-E: 2053, Round-F: 5188, Round-H: 1328.
- * Secured Global Rank **928** in **Round-1C** of **Google CodeJam 2022**.
- * Secured Global Rank **1496** in **Round-1** of **Google HashCode 2022**.
- * **4-Star Coder** at Codechef(ID: amrit2104) with **Max Rating: 1883**.
- * Secured **All India Rank 4469** in JEE Advanced 2018.
- * Secured **All India Rank 1854** in JEE Main 2018.
- * Ranked among **Top-20 teams** in the institute for Flipkart-Grid Engineering Campus Challenge 2020.
- * Bagged **2nd Position** in Short Film Making held during Cultural Championship in the Institute(2019).

POSITIONS OF RESPONSIBILITY

Student Placement Coordinator	July 2022 – Present
Student Internship Coordinator	Aug 2020 – July 2021
Governor of Cinewave(Cinematic Society)	Aug 2020 – July 2021
Branch Representative and Member of Hostel Council	March 2019 – July 2021
Web Development Core Head of Alma Fiesta(Socio-Cult Fest)	Oct 2018 – July 2021
Member of Souls for Solace(Socio-Welfare Society)	Oct 2018 – Present

ONLINE COURSE WORK

Data Structures and Algorithms(IIT Delhi)	<i>NPTEL</i>
Machine Learning	<i>Stanford University, Coursera</i>
Neural Networks and Deep Learning	<i>deeplearning.ai</i>
Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization	<i>deeplearning.ai</i>
Learning Python for Data Analysis and Visualization	<i>Udemy</i>
30 days of Google Cloud	<i>Qwiklabs</i>