Amrit Gaurav Rath

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EDUCATION

Indian Institute of Technology Bhubaneswar   Bhubaneswar, Odisha
Dual Degree Specialization in Electrical Engineering, CGPA: 7.82   *Aug. 2018 – May. 2023(Expected)*

MP & EV English Medium School   Vishakapatnam, AP
Class XII, Score: 92%   *Aug. 2016 – May. 2018*

Saint Anne's School   Titilagarh, Odisha
Class X, Score: 93.67%   *May. 2016*

WORK EXPERIENCE

Research Intern   May 2021 – July 2021
Supervisor: Dr. Dipankar De   *IIT Bhubaneswar*

- Developed a Dual Active Bridge based interface for Electric Vehicle 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   April 2020 – June 2020
Supervisor: Rajesh Kumar Adla   *Null Innovations, Hyderabad*

- Developed two Websites for the company using WordPress for Frontend and PHP & MySQL for Backend.
- Designed an Artificial Bot 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 code 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.

Web Development | *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 Convertor App | *Python, Flutter*   Jan 2021

- ∗ Trained a deep learning model to recognize hand-written characters, letters and numbers using OCR.
- ∗ Created a Flutter App that will click pictures of text pages and convert it into text format using the model.
- ∗ Used transfer learning methods on the pretrained ResNet50 model of Keras and used SGD as optimizer.
- ∗ The model 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 likelyhood of Survival of Passenger on Titanic based on various factors.
- ∗ Implemented various Machine Learning Models such as Random Forest Classifier and Support Vector Machine.

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.
- ∗ Best Google **Kick Start 2021** Global Ranks(ID: amrit2104): Round-E: 2053, Round-F: 5188, Round-H: 1328.
- ∗ Secured Global Rank **1496** in **Round-1** of **Google HashCode 2022**.
- ∗ **4-Star Coder** at Codechef(ID: amrit2104) with **Max Rating: 1871**.
- ∗ 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).

Technical Skills

Programming Languages: C/C++, MATLAB/Simulink, Python
Web Development: JavaScript, Bootstrap, HTML/CSS, PHP, MySQL, WordPress
CS Fundamentals: DSA, DBMS
Python Packages: Numpy, Pandas, Matplotlib, Scipy, Seaborn, Scikit-Learn
Cloud Skills: G-Cloud
Developer Tools: VS Code, Android Studio, Flutter, Sublime Text, MATLAB
Adobe Designing Tools: After Effects, Premiere Pro, Illustrator

Extra Curricular

Student Internship Coordinator — Aug 2020 – July 2021
Career Development Cell — *IITBBS*

Governor — Aug 2020 – July 2021
Cinewave — *Cinematic Society*

Branch Representative and Member of Hostel Council — March 2019 – July 2021
Electrical Engineering — *Mahanadi Hall of Residence*

Web Development Core Head — Oct 2018 – July 2021
Alma Fiesta — *Socio-Cultural Fest*

Member — Oct 2018 – Present
Souls for Solace — *Social Welfare Society*