

# Amrit Gaurav Rath

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## EDUCATION

### Indian Institute of Technology Bhubaneswar

Dual Degree Specialization in Electrical Engineering, CGPA: 7.82

### MP & EV English Medium School

Class XII, Score: 92%

### Saint Anne's School

Class X, Score: 93.67%

Bhubaneswar, Odisha

Aug. 2018 – May. 2023(Expected)

Vishakapatnam, AP

Aug. 2016 – May. 2018

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 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

Supervisor: Rajesh Kumar Adla

April 2020 – June 2020

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 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.

## ACHIEVEMENTS

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- \* 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

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**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

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<b>Student Internship Coordinator</b>	Aug 2020 – July 2021
<i>Career Development Cell</i>	<i>IITBBS</i>
<b>Governor</b>	Aug 2020 – July 2021
<i>Cinewave</i>	<i>Cinematic Society</i>
<b>Branch Representative and Member of Hostel Council</b>	March 2019 – July 2021
<i>Electrical Engineering</i>	<i>Mahanadi Hall of Residence</i>
<b>Web Development Core Head</b>	Oct 2018 – July 2021
<i>Alma Fiesta</i>	<i>Socio-Cultural Fest</i>
<b>Member</b>	Oct 2018 – Present
<i>Souls for Solace</i>	<i>Social Welfare Society</i>