

Amrit Gaurav Rath

✉ agr10@iitbbs.ac.in | ☎ 9439092128 | 🔗 [linkedin.com/in/amrit2104](https://www.linkedin.com/in/amrit2104) | 🌐 github.com/amrit2104

EDUCATION

Indian Institute of Technology, Bhubaneswar

Bhubaneswar, Odisha, India

Dual Degree(B.Tech+M.Tech) in Electrical Engineering, CGPA: 7.9/10.0

Aug 2018 – May 2023

SKILLS

Programming/Scripting Languages:- C/C++, Groovy, MATLAB, Python

DevOps:- AWS, Docker, Kubernetes, Helm, Jenkins, Argocd, Fluxcd, Grafana, Istio, Linux, Nutanix, GCP

Databases:- Postgres, Kafka, Druid, Flink, Elasticsearch, Redis, MySQL, MongoDB

Web Development:- JavaScript, NodeJS, ExpressJS, REST API, GraphQL, React, HTML, CSS, Bootstrap, PHP

Miscellaneous:- Data Structures, Algorithms, OOPS, System Design, Linux, GitLab, GitHub

WORK EXPERIENCE

Brane Enterprises Pvt. Ltd.

Bengaluru, Karnataka, India

Software Development Engineer-1

Jun 2023 – Present

- * Deployed 10+ microservices till pre-prod and production using **Helm Charts**, utilized **Argocd and Fluxcd** for continuous deployment, **Jenkins** for continuous integration, and **Istio** for gateway/routing.
- * Migrated microservices & databases from **AWS** to **Nutanix** infrastructure saving \$500,000/pa on AWS Billings.
- * Worked on setting up druid, kafka, flink, elasticsearch, clickhouse on **EC2 & K8S based clusters** along with monitoring setup on **Grafana**; Hosted on AWS ALB & cloudflare, automated onboarding process with **ansible**.
- * Executed **multi architecture docker** images and deployed them on arm instances for cost optimization.
- * Automated the process of postgres, mongo, ES & dynamo **data migration** across tenants with **Jenkins pipeline**.
- * Familiar with **AWS components** like EC2, Elastic Kubernetes Service, Elastic File System, Lambda function creation, RDS(Postgres), MSK(Kafka), OpenSearch(ES), IAM and S3.
- * Recognised as one of the **top performers** out of 1000+ employees in the **Engineering Team** for FY2023-24.

MAJOR PROJECTS

Event Booking WebApp using GraphQL | MERN, GraphQL, JWT

Jun 2024

- * Built a Web Application using **MERN Stack** and **GraphQL API** to book, view, add & cancel events.
- * Integrated **JWT**-based authentication for secure user registration, login, and access control for different features.
- * Created functionalities using **GraphQL** query and mutations, enhancing the app's efficiency and user experience.
- * Employed MongoDB with **Mongoose** for database & schema definition, ensuring efficient, scalable data storage.

Real-Time Group Chat WebApp | HTML, CSS, JavaScript, Socket.io

Oct 2023

- * Created a group chat application for real-time, bidirectional communication between clients and servers.
- * Utilized **Socket.io**'s event-driven architecture for handling user events, enhancing responsiveness and interaction.
- * Built frontend with HTML, CSS, and backend with nodejs/express to manage connections and events.

Model Predictive Control(MPC) of DC-DC Converter | MATLAB, Simulink, STM32

May 2023

- * Designed **MPC** to control a real-time hardware setup of electrical converter using an STM32 microprocessor.
- * Successfully brought down the settling time from 1.5ms to 1ms by using MPC over a traditional PID controller.

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

Mar 2021

- * Developed the Registration Website for 20+ cultural events in Annual Socio-Cultural Fest 2021.
- * Handled 500+ registrations while hosting them on CPanel, also managed database using MySQL/PHP.

PUBLICATIONS, ACHIEVEMENTS & PORs

- * **Paper published:** "A Hybrid Model Predictive Controller for an Integrated Dual-DC Boost Converter," by Ritam Chakraborty, Amrit Gaurav Rath, Olive Ray, and Kapil Jha, at the **INTELEC 2024**.
- * Secured **Global Rank 1680** in 2021 and **2450** in 2022 **Meta Hackercup Round-2**.
- * Competed in **Google Kickstart(id:amrit2104)**, **2022:** Global Ranks(ID: amrit2104): Round-B: 1313, Round-D: 1693, Round-F: 1990, Round-G: 1623, & Round-H: 1986, **2021:** Round-E: 2053, Round-H: 1328.
- * Solved **600+** questions on **Leetcode** and GFG; Achieved **4-star on codechef**(max rating: 1988).
- * Represented 400+ students and coordinated industry relations for **student placements & internships** at CDC.
- * Taught 50+ 3rd and 4th year students for electrical engineering labs as **Graduate Teaching Assistant**.
- * Served as governor for film making club, member of socio-welfare club & branch representative for EE students.
- * Achieved **All India Rank 4469** in JEE Advanced 2018 & **All India Rank 1854** in JEE Main 2018.