

BIOTECHNOLOGY & BIOCHEM. ENGG. (M.Tech Dual 5Y)  
MICRO SPL. in ENTREPRENEURSHIP AND INNOVATION

## EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2024	M.TECH Dual Degree 5Y	IIT Kharagpur	8.16 / 10
2019	CBSE (XII)	MDS Public School, Udaipur	85.60%
2017	CBSE (X)	St. Paul's Sr. Sec. School, Udaipur	9.00 / 10.00

## INTERNSHIPS

## Software Development Intern | CloudOptix Private Limited

[May 2023 - July 2023]

- Crafted a dynamic and responsive **UI** using **React.js** and designed the backend infrastructure for the website through **Flask**
- Retrieved the **timestamped** metrics from the system using **Telegraf** and imported data in **InfluxDB** for efficient data storage
- Containerised all the dependencies to enhance the **scalability** and simplified deployment processes by capitalizing **Docker**
- Devised insightful dashboards for users' data interpretation and enhanced website's analytics capabilities through **Grafana**

## Web Development Intern | Bridge Healthcare Private Limited

[June 2022 - July 2022]

- Constructed the frontend of the healthcare application using **Figma** and implemented the interactive **UI** through **QT Creator**
- Utilized **Amazon Web Services** like **Cognito** to authenticate, **Chime** for streaming videos and **Elastic Beanstalk** to deploy
- Acquainted with **Amazon Pay API**, **Amplify** to host, **SecuGen WebAPI** to read fingerprints, **SQL** and **MongoDB** database

## COMPETITION/CONFERENCE

## Product Design | General Championship | Gold Medal

[March 2023]

- Objective:** Design a hardware product to ensure that the rider wears the helmet all the time and does not ride intoxicatedly
- Spearheaded the team to win the **Gold Medal** in the General Championship as **team's captain** among **20+** competing teams
- Designed **helmet module** to check if helmet is worn with a push switch, while intoxication is checked by alcohol gas sensor
- In case of an accident detected by the **tilt sensor**, the location is sent by the use of the **GSM module** to self-fed close contact

## Opensoft | Gymkhana Championship | Top 5

[March 2022]

- Objective:** Create a food delivery application to ensure the availability of essential services during the downtime of data centre
- Developed a **Microservice** architecture based app using **Hybrid Cloud** to minimize losses due to unavailable vital services
- Created frontend infrastructure via **Figma**, **React.js** and **Material UI** and a **Grafana** dashboard to visualize the cluster metrics
- Curated **APIs** implementing **Models**, **Serializers** and **Class-based Views** for microservices using **Django REST Framework**
- Ensured smooth **Data Replication** and **syncing** amongst the **microservices clusters** using **Message Broker RabbitMQ**
- Simplified the **scaling** of the app using **Kubernetes** as an **orchestrator** and containerised the microservices using **Docker**

## PROJECTS

## Intraday Trading Indicator | Self Project

[April 2023]

- Implemented a strategy that yielded **14%** return as compared to **2%** return given by any market trade instrument for that day
- Predicted **121** precise signals via Relative Strength Index, Moving Average, Average Directional Index, Parabolic Stop, Reverse
- Integrated **Support Vector Classification** method to formulate buy/sell signals and optimised the F1-score of model to **78**

## Stock Market Simulator | Self Project

[February 2023]

- Predicted the market returns and metrics such as **Beta**, **Sharpe Ratio** and **CAPM** for live data of the US market instruments
- Carried out **Monte Carlo simulation** technique using the concept of brownian motion on stocks as the mode for simulation
- Simulated, compared and analysed multiple stocks at once using past performance data by calculating their drift and volatility

## AWARDS AND ACHIEVEMENTS

- Bagged a position among the top **3000** students qualified for **Amazon ML Summer School 2022**, a nationwide competition
- Ranked **1769th** in **Google Kickstart** Round C 2022, **1584th** in Codeforces Round **886**, **1406th** in Codeforces Round **916**
- Secured **374th** position on the **GFG** leaderboard with **3134** points and at the **4th** position among students of IIT Kharagpur

## SKILLS AND EXPERTISE

- **Programming:** C++ | C | Java | JavaScript | Python | HTML | CSS
- **Databases:** SQL | SQLite | MongoDB | InfluxDB
- **Software:** VS code | AWS | GitHub | Git | Google Colab | Jupyter Notebook | QT Creator | Linux | Figma
- **Frameworks:** Django | DRF | Node.js | React.js | Express.js | Bootstrap | Material UI | Flask | Telegraph | Docker | Grafana

## COURSEWORK INFORMATION

- **Programming:** Design and Analysis of Algorithms | Programming and Data Structures | Theory of Operating Systems
- **Math:** Probability and Statistics | Linear Algebra | DL Foundations and Applications | Statistical Foundations for AI and ML
- **Misc:** Eco | Foundations of EP | Engineering BPlan | Eco of EP | Product Development | Intro to Finance | DL Specialization

## EXTRA CURRICULAR ACTIVITIES

- Served as **Captain** for session 22-23 and **Vice-Captain** for session 21-22 to the **Product Design** Team, RK Hall of Residence
- Participated enthusiastically for the **Dramatics** team for session 21-22, Radha Krishnan Hall of Residence for Inter-Hall events