# Ritwik Raha

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## EXPERIENCE

**Tata Consultancy Services** <div align="right">Feb 2021 – Present</div>

*Assistant System Engineer Trainee*
- Machine Learning Engineer, responsible for training, deploying and maintaining a custom machine-learning model for trailer space optimization.
- Improved trailer fill optimization by 28 percent by accurately predicting the target value with a mean error margin of less than 3 percent.

## EDUCATION

**Netaji Subhash Engineering College** <div align="right">Kolkata, West Bengal</div>

*Bachelor of Technology* <div align="right">*2016 – 2020*</div>
- Electronics and Instrumentation
- Avg CGPA 7.89

**Sri Aurobindo Institute of Education** <div align="right">Kolkata, West Bengal</div>

*Junior and High School* <div align="right">*Year of Passing 2016*</div>
- ISC, 12th Standard – Percentage: 90.25
- ICSE, 10th Standard – Percentage: 86.8

## RESEARCH

**Causality Analysis of Emotional States from EEG Response** <div align="right">2019 – 2020</div>

*2020 IEEE 1st International Conference for Convergence in Engineering (ICCE)*
- A novel study of the feature elements in corresponding emotional EEG states to investigate the appearance of repeating or residual elements which serve as the foundation of memory or causality in EEG signals.
- Investigation of the likelihood of predicting a certain emotional state given the subjects previous emotional state.

**Medical Image Fusion using PCNN Optimized by Whale Optimization Algorithm** <div align="right">2018 – 2020</div>

*2020 IEEE 1st International Conference for Convergence in Engineering (ICCE)*
- A novel algorithm for the fusion of medical images using a modified Pulse Coupled Neural Network(PCNN) optimized by the Whale Optimization Algorithm(WOA).
- Design of multi-criteria fitness function to extract features from an image without any prior training of the Pulse Coupled Neural Network.

## PROJECTS

**Cerebro-Visualiser** | *Python,Streamlit, Heroku* <div align="right">January 2021</div>
- Built an interactive web application to visualise EEG Data
- That filters specific frequency bands and is able to plot the topographical map of the brain.

**GDG Kolkata Devfest 2019 App - Design** | *Adobe XD, Figma* <div align="right">July 2019</div>
- Designed the UI/UX of the Devfest Kolkata Android App
- Using the materialdesign guidelines and replicating brand identity.
- Worked closely with a team of android developers to materialise the final design.

## TECHNICAL SKILLS

**Languages**: Python, SQL, Java, MATLAB, R
**Frameworks**: Tensorflow, Weights and Biases, FastdotAI
**Developer Tools**: Git, VS Code,PyCharm, RStudio
**Libraries**: pandas, NumPy, Matplotlib,PyTorch, TensorFlow, ScikitLearn

## OTHER DETAILS

**Lead Designer and Member**- Google Developers Group Kolkata
**Writer**- A passionate storyteller with a flair for thriller.