PARTHA METE

M.Sc. in Big Data Analytics
RKMVERI, Belur Math, West Bengal, India

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PROJECTS

- **3D Avatar Construction(Template Modeling, Texture Mapping, Blending, Realism)** *July 2025 – Ongoing*
  - Developing an end-to-end pipeline to convert 2D comic characters into animatable 3D avatars using deep learning for segmentation and template-based 3D reconstruction .
- **Semantic Image Synthesis with GauGAN**
  TensorFlow | GAN | SPADE | VAE | Semantic Segmentation [View Code] *Jan 2025 – Ongoing*
  - Built GauGAN from scratch using SPADE normalization and a variational encoder for semantic-to-image translation.
  - Trained on Facades and Pascal VOC datasets with multi-loss optimization (GAN, KL, VGG, feature matching).
- **Unsupervised Sign Gloss Discovery from Continuous Sign Videos**
  PyTorch | Autoencoders | MediaPipe | K-Means | HMM [View Code] *Jan 2025 – Jun 2025*
  - Extracted and normalized 3D pose and hand keypoints from sign videos using MediaPipe Holistic and trained separate autoencoders to learn compact latent features from skeletal motion data.
  - Preparing latent sequences for unsupervised segmentation using Probabilistic HMM.
- **Smart Control Hub:Multi-Functional Virtual Controller using Hand Gestures**
  OpenCV| Mediapipe | Python | PyAutoGUI | PyCAW [View Code] *Jan 2025 - May 2025*
  - Built a webcam-based virtual controller with gesture-driven modules for **volume/brightness, mouse control, and slide navigation**.
  - Used **Mediapipe** for real-time 3D hand landmark tracking; integrated system actions via **PyAutoGUI** and **PyCAW**.
- **Artistic Image Transformation in Ghibli Aesthetic**
  PyTorch | CycleGAN | GAN | Unpaired Translation | Image Generation [View Code] *Jan 2025 – May 2025*
  - Implemented CycleGAN from scratch for unpaired image-to-image translation between real and Ghibli-style domains.
  - Trained on image dataset with custom preprocessing and identity, cycle consistency, and adversarial losses.
- **Gas Turbine Energy Yield Prediction using Regression Analysis**
  Python | Scikit-learn | Pandas | Seaborn [View Code] *Sep 2024 – Nov 2024*
  - Developed and evaluated multiple regression models (Linear, Polynomial, Ridge, Lasso, ElasticNet) to predict the hourly energy yield of a gas turbine.
  - Conducted exploratory data analysis (EDA), assessing feature correlation and multicollinearity using VIF, and optimized model performance with GridSearchCV.

COURSEWORK

- Deep Learning
- Natural Language Processing
- Computer Vision
- Artificial Intelligence
- Machine Learning
- Statistics
- Linear Algebra
- Time Series
- Survival Analysis
- Probability
- Econometrics & Finance
- Reinforcement Learning

EDUCATION

- **Ramakrishna Mission Vivekananda Educational and Research Institute, Howrah**
  M.Sc. in Big Data Analytics
  2024 – Present (Sem-1) CGPA: 7.33
- **Asutosh College, Kolkata**
  B.Sc.(H) in Statistics
  2020 – 2023 CGPA: 8.033
- **Ramakrshna Mission Boys' Home High School,Rahara**
  Higher Secondary
  2018 – 2020 Score: 97%
- **Ramakrshna Mission Boys' Home High School,Rahara**
  Secondary
  2007 – 2018 Score: 92.83%

TECHNICAL SKILLS

- **Programming Languages:**Python, R, HTML, LaTeX
- **Libraries:** NumPy, Pandas, Scikit-learn,Matplotlib, Pytorch,OpenCV,Seaborn,MediaPipe,Streamlitl
- **Tools:**Git/Github, Google Colab, Jupyter Notebook, VS Code, MS Office
- **Operating System:**Windows, Linux (Ubuntu)

ACHIEVEMENTS

- **Qualified** in written test of ISI MSQMS 2024
- **Qualified** IIT-JAM 2024
- **Qualified** CUET 2024

LEADERSHIP POSITIONS

- **Fest Organizer**
  – Organizing Committee Member, Perceptron 2025 (annual deparmental tech fest) [*Jan.'25*]

HOBBY

- Indian Music, Football