

Jayanta Roy

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EDUCATION

Narula Institute of Technology, Bachelor of Technology 2020 – 2023 | Kolkata
in Computer Science and Engineering
Percentage – 77% (C.G.P.A – 8.10)

South Calcutta Polytechnic(WBSCTE), 2018 – 2020 | Kolkata
Diploma in Computer Science and Technology
Percentage – 71.90%

WORK EXPERIENCE

Machine Learning Engineer, Sep 2023 – Mar 2024
Paythrough Softwares and Solutions Pvt Ltd Kolkata, India

- **Loan prediction model** :- It's a regression problem, and I generated the model's mathematical data using Numpy, Pandas, and the Random Library. The online learning model was trained with the SGD algorithm, and I used Matplotlib for EDA and data visualisation.
- **Loan repayment model using customer repayment behavior** :- It is a regression problem, I have generated mathematical data for this model (using Numpy, Pandas, Math, and the Random Library). I have integrated the customs function to compute the interest rate, repayment period, and other factors. To train this model, the SGD algorithm is employed.
- **Recommendation system for customers using purchase behavior** :- It is a unsupervised model. For this model, I generated mathematical data using Numpy, Pandas, and Random Library. It is further subdivided into two models: one for "New Customer" (where the four most purchased products are recommended to the new customer) and one for "Existing Customer" (where the three least purchased products utilised by each individual client are recommended using selection sort). Model training is done using the SVD algorithm.
- **Fine-tuned Mistral-7B-Instruct-V0.2 using e-commerce FAQ dataset** :- This is a FAQ chatbot specially designed for E-Commerce website. I have download "Mistral-7B-V0.2" model from hugging face and dataset is used from open source API. "PEFT" with Lora is used to initialized the training argument. SFT(Supervised Fine-tuning Trainer) is used to fine-tune the model.

Django Web Developer, TripleATech Jun 2022 – May 2023 | Remote

- Developed a Customer Relationship Management (CRM) Website as a backend developer using Django framework and MySQL database
- Developed a Online Pet Service website from scratch for both customer and admin (Technology used Django framework, HTML, CSS, JS, ,Google Distance API, MySQL server)

SKILLS

Programming language - C/C++, Python

Data Structure and Algorithm, OOPs Concept, Software development, Networking, SQL,

Data Science / Machine Learning / Deep Learning - MLOps, Data Visualisation, Supervised learning Algorithm, Unsupervised Learning Algorithm, EDA, Feature engineering, Feature selection & extraction, XGBoost, SGD algorithm, NLP, LLM, HuggingFace, Mistral-7B, LangChain, Gemini, Llama, GPT,

Python Libraries - Scikit-Learn, TensorFlow with Keras, NumPy, Pandas, Matplotlib, BeautifulSoup, Pytorch.

Cloud Platforms - GCP, AWS SageMaker, AWS LightSail, AWS EC2, AWS Lambda, AWS S3.

Web Technologies - HTML, CSS, JavaScript, Google Distance API.

Django Framework - Django ORM, Celery(Redis), Rest APIs, MySQL, Django Libraries.

Tools - MS Excel, Jupyter Notebook, GitHub, Git, MySQL, Windows OS, FileZilla.

PERSONAL PROJECTS

Sentiment Analysis Chatbot [🔗](#)

- Creative content generation chatbot.
- This chatbot is designed to predict the sentiments related to the generated text.
- Gemini-pro model used for text generation, DistilBERT is used for sentiment analysis.

Fine-tuned Mistral-7B-Instruct-V0.2 using mental health dataset [🔗](#)

- Psychiatrist Chatbot.
- This chatbot provides solutions to mental health issues.
- "Mistral-7B-V0.2" model used for fine-tuning and dataset is used from hugging face API.

AI Chatbot using Gemini-AI [🔗](#)

- This is a most advance AI chatbot powered by Gemini-AI. This AI tool can be use for any purpose like education, information, mathematical calculation and for personal assistant.
- Technology used - Python, Gemini API, Streamlit.

Weather App using Webscripting [🔗](#)

- Weather API can be use to check temperature of any city. Fast and user friendly API, no external API is used.
- Technology used - Python libraries, Streamlit(UI).

Password Strength Checker App using Machine Learning [🔗](#)

- This app is useful to check the strength of the password and also can be implemented in registration system.
- Successful deployed in streamlit.
- Technology used - Python, Google Colab, MLP Classifier, Standard Scaler, EDA, pipeline, for EDA I have used numpy, pandas matplotlib, seaborn.

Personal Portfolio, Visual representation of skills and experience [🔗](#)

- Technology used – HTML, CSS, Javascript.