**Uday Patel**
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https://github.com/patelruday?tab=repositories

https://xcodings.com

## Objectives

Dedicated and results-driven professional with a strong foundation in data analysis, machine learning, and artificial intelligence seeking to leverage my analytical skills, domain knowledge, and passion for data-driven insights to excel in a career in Data Science and AI.

## Qualification

**B-Tech-** 2005(Electronics & Communications) from Dr.APJ Abdul Kalam Technical University, Lucknow, U.P.

**Data Science/AI course**

Completed online data science an AI course offered by **Codebasics**.

Completed AI certification course offered by **C-DAC** Pune.

**Certification: NASSCOM** Certification in AI.

**Certification ID:** FSP/2024/8/10179331

Certificate link:

https://github.com/patelruday/AI_Certificate.git

## Data science/ML/NLP/AI Knowledge

**Data Science:**

- Proficient in data preprocessing, cleaning, and exploratory data analysis (EDA) using tools like Pandas, NumPy, and Matplotlib.
- Skilled in feature engineering and selection techniques to optimize model performance.
- Experienced in statistical analysis, hypothesis testing, and A/B testing to derive actionable insights.
- Familiar with data visualization techniques to communicate findings effectively.

**Machine Learning (ML) Knowledge:**

- Hands-on experience with supervised, unsupervised, learning algorithms such as linear regression, decision trees, random forests, support vector machines (SVM), k-means clustering, and neural networks.
- Proficient in model evaluation and hyperparameter tuning using techniques like cross-validation, grid search, and Bayesian optimization.

**Deep Learning:**

- Familiar with deep learning frameworks such as TensorFlow for building and training deep neural networks.
- Experienced in Convolutional neural networks (CNNs) for image classification and object detection tasks.
- Knowledgeable in recurrent neural networks (RNNs) and long short-term memory networks (LSTMs) for sequence modeling and natural language processing (NLP).

**Natural Language Processing (NLP):**

- Proficient in text preprocessing techniques such as tokenization, stemming, lemmatization, and part-of-speech tagging.
- Skilled in building NLP models for sentiment analysis, named entity recognition (NER), text classification, and language translation using techniques like word embeddings (e.g., Word2Vec, GloVe) and transformers (e.g., BERT, GPT).
- Experienced in working with NLP libraries like NLTK, SpaCy Transformers for model development and deployment.

## Data science and AI tools:

**Programming Languages:** Python, Basic knowledge of HTML, CSS, JavaScript
**Database**: SQL
**Machine Learning Algorithms:** Supervised and Un-Supervised
**Deep learning concepts:** ANN, CNN, RNN, LSTM
**NLP framework**: Spacy,gensim, Word2Vec,glove
**Deep Learning Frameworks:** TensorFlow, keras,
**Transformer:** BERT
**Data Visualization:** Matplotlib, Seaborn,
**Data Wrangling:** Pandas, NumPy,
**ChatGpt:** Leveraged prompting techniques to generate code and solve programming challenges efficiently.

## **Project**: Customer Segmentation and Recommendation system for online store

***Project Details**:*

In this project, I delve deep into the thriving sector of online retail by analyzing a transactional dataset from a UK-based retailer, available at the UCI Machine Learning Repository. This dataset documents all transactions between 2010 and 2011. My primary objective is to amplify the efficiency of marketing strategies and boost sales through customer segmentation. My aim to transform the transactional data into a customer-centric dataset by creating new features that will facilitate the segmentation of customers into distinct groups using the K-means clustering algorithm. This segmentation will allow us to understand the distinct profiles and preferences of different customer groups. Building upon this, we intend to develop a recommendation system that will suggest top-selling products to customers within each segment who haven't purchased those items yet, ultimately enhancing marketing efficacy and fostering increased sales.

Code link:
https://github.com/patelruday/Customer_Segmentation_and_Recommendation_for_Online_store.git

## **Project**: Image Caption Generator

***Project Details:***

The objective of the project is to predict the captions for the input image. The dataset consists of 8k images and 5 captions for each image. The features are extracted from both the image and the text captions for input. The features will be concatenated to predict the next word of the caption. CNN is used for image and LSTM is used for text. BLEU Score is used as a metric to evaluate the performance of the trained model.

Code link:
https://github.com/patelruday/Image_caption_generator.git

## **Project**: Sentiments analysis for mental health monitoring

***Project Details:***

This project aims to harness the power of sentiment analysis, a subset of natural language processing (NLP), to monitor mental health through textual data. Sentiment analysis involves the use of algorithms and machine learning techniques to identify and extract subjective information from text, categorizing it as positive, negative, or neutral. By applying sentiment analysis to text data from various sources, we can gain valuable insights into the emotional and mental states of individuals.

Code link:
https://github.com/patelruday/Sentiment_analysis_for_mentol_health_monitoring.git

## **Project**: Sentiments analysis for movies viewer's using BERT transformer

***Project Details:***

This aim of this project is to monitor the sentiment of user for movies whether it is negative or positive. This dataset used aclimdb contains movie reviews along with their associated binary sentiment polarity labels. BERT transformer is used to encode and embedding for textual data. CNN is used for modeling.

Code link:
https://github.com/patelruday/Sentiments_analysys_using_BERT_transformer.git

## **Project**: Face Emotion Recognition

***Project Details:***

The objective of the project is to detect facial expression using image dataset. Convolutional Neural Network is used to classify the images. The output class consists of 7 different types namely angry, disgust, fear, happy, neutral, sad, surprise.

Code link:
https://github.com/patelruday/Facial_emotion_recognition.git

## **Project**: Movie recommender system

***Project Details:***

In this project, I developed a Movie Recommendations System using machine learning techniques. The goal was to create a personalized recommendation engine that suggests movies to users based on their preferences and past interactions.

Code link:

https://github.com/patelruday/Movie_Recommender_system.git

## **Project:** House price predictor

***Project Details:***

This project focuses on developing a Machine Learning model for predicting house prices based on various features. The prediction model is based on a supervised learning approach, after evaluating different type of algorithms such as Linear

Regression, Decision Tree Regression, Random Forest Regression and SVM , Linear Regression is chosen.

Code link:

https://github.com/patelruday/House_Price_predictor.git

## **Project:** Fake news detection

***Project Details:***

Develop a Deep learning program to identify when an article might be fake or real news.
Code link:
https://github.com/patelruday/Fake_News_detection.git

## **Project**: Potato leaf disease detection

***Project Details:***

In this project, I developed a Potato Leaf Disease Detection model using Convolutional Neural Networks (CNNs). The goal was to create an efficient and accurate system that could automatically identify various diseases affecting potato leaves. The model was trained on a comprehensive dataset **Plant village**, consisting of images of healthy potato leaves as well as leaves affected by common diseases such as late blight, early blight. The dataset was preprocessed to ensure uniformity and quality for training the CNN.

Code link:

https://github.com/patelruday/Potato_leaf_desease_detection.git

## **Project:** Comprehensive Housing Market Analysis (EDA)

***Project Details****:*

In this project we analyze house prices in the city of Melbourne Australia. Answering questions like which sectors are the most expensive in the city of Melbourne? By how much did price increase over the years? Is there a particular month where houses are sold more?  Many more other questions and explore their answers.

Code link:
https://github.com/patelruday/Melbourne_husing_data_EDA.git

## **Project**: Hospital quality analysis

*Project Details:*
In this project, we analyze the various aspects of a hospital such as mortality rate, hospital overall rating , safety of care, Patient experience, Effectiveness of care etc. of hospitals in USA.

Code link:
https://github.com/patelruday/Hospital_quality_data_EDA.git

## Professional experience

**Relevant experience:** I am new in AI and data science domain but I have done many Machine learning, Deep learning and NLP project during course completion for AI certification. Received Silver certificate from NSSCOM for AI . Please explore my works on below links.

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### Telecom domain experience:

Indoor Planning and Optimization,16 years of combined experience in, network implementation, and Network optimization phases with special emphasis on Project Plan development, Resource planning, cost and budget control, quality control, time management and project reporting.

**JULY 2008-FEB 2023**
**Organization:** Shivam Infocom Pvt Ltd.New Delhi.
**Designation**: AM
**Department:** IBS/WiFi and FTTH Project
**Responsibilities:**

Manage technical and deployment team for smooth execution of IBS project

**Technical responsibilities**

- Preparing the nominal cell plan for the building.
- Conducting initial RF survey of the building from design point of view.

- RF design/technical proposal for In-building Solutions i.e estimate link budget EIRP for each antenna, coverage prediction plot for all technologies 2G,4G,LTE.
- RF BOQ for the site designed.
- Check all KPI after implementation of IBS site also do optimization if required.

**Deployment Responsibilities**

- To ensure complete the project in time as agreed by customer.
- Manage all activities in IBS site i.e RF cabling along with splitter, coupler and antenna installation for SISO and MIMO , civil work for pole and BTS, pole installation for MW and high gain antennas and all electrical set up requirements.
- Co-ordinate with all stake holders such as vendor, building facility team and customer to execute project smoothly.

**JULY-2006 to JUNE 2008**

**Organisation:** Thetacom telesolution Pvt Ltd., New Delhi
**IBS Planning and Design** -Engineer.
**Project handled**: Done Projects for In Building Solutions for Vodafone, Idea, BSNL Airtel & Indus in Delhi/NCR & Rajasthan

**Personal details**

| | |
|---|---|
| Name | Uday raj patel |
| Father's name | Sri. Mohan lal patel |
| Address | Govind puri |
| | New Delhi |
| Contact | 8447148226, |
| Date: | |

Uday Patel