Aditya Ghadge

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WORK EXPERIENCE

Data scientists

Giant Analytics [15/05/2023 – Current]

City: Mumbai | **Country:** India

Dedicated to research-based AI projects, specializing in Generative AI and natural language processing (NLP). Worked closely with clients and senior data scientists from the US and Ireland, gaining invaluable guidance and mentorship. This collaboration has kept me at the forefront of AI innovation, applying the latest models to solve complex challenges.

Projects and Contributions

Generative AI Fashion Project (Current Leader)

- Leading a team to develop state-of-the-art image generation and vision-language models.
- Developing workflows, communicating with clients, training models on custom datasets, creating documentation, and managing data storage.
- The project is in its initial phase.

CLIP Model Recommendation System

- Researched, studied, and developed the CLIP model.
- Created architecture with PyTorch, managed datasets, and trained multiple versions.
- Developed a recommendation system to enhance precision and relevance.

Doc TO Doc Project

- Developed an algorithm to transform unstructured documents into structured formats.
- Worked on the pipeline, extraction, API connections, interface for demos, and Docker images.
- Pushed Docker images to ECR for seamless integration.

Doc TO PPT Project

- Converted documents into PowerPoint presentations.
- Resolved errors, assisted teammates, developed FastAPI code, integrated with AWS S3 Bucket and AWS SQS, and managed Docker images.

Custom Recommendation System

- Implemented statistical methods and a grid-based framework.
- Used data structure and algorithm techniques.
- Developed FastAPI APIs for scalability.

AWS and GCP Deployment

- Expanded capabilities to include deployment on AWS with Docker files and Docker Compose.
- Enhanced deployment efficiency and scalability.
- Created and managed Docker images, performed version control, and utilized AWS CLI.
- Deployed projects on AWS instances with Nginx.

Image Object Detection System

- Developed using advanced algorithms and pre-trained models like YOLO.
- Handled dataset annotation and significantly boosted detection accuracy and efficiency.
- Documented model results and accuracy.

Data Extraction from PowerPoint and PDFs

- Extracted datasets from platforms like Screener and SlideShare.
- Employed scraping techniques for extraction.

DocChat Tool Development

- Created a tool enabling users to derive insights from PDF documents via natural language queries.
- Integrated sophisticated NLP tasks and custom document indexing.

Product Photography Image Generation

- Used stable diffusion inpainting to create product photography-like images.
- Created a client demo.

Diverse Use Case Demos with LLM Models

- Worked with models like Gemma, Llama, Mistral, and KERAN.
- Developed diverse use case demos for client engagement

Web Researcher

Info Talent Consulting [01/10/2021 – 30/04/2023]

City: Mumbai | **Country:** India

- Conducted research on companies in the UK, including gathering contact information for executives such as CEOs, FDs, CFOs, FCs, and FMs.
- Developed a Python program for data scraping from LinkedIn, enabling efficient extraction of job details from company pages.
- Demonstrated strong research skills, attention to detail, and proficiency with software and databases. Contributed to business objectives such as lead generation, market research, and recruitment.

EDUCATION AND TRAINING

Post graduation diploma in Predictive analytics

BSE Institute Ltd [31/08/2022 – 31/08/2023]

City: Mumbai | **Country:** India | **Website:** https://www.bsebti.com/

Bachelor of Science (BSc) in Physics

University of Mumbai [06/2017 – 09/2020]

City: Mumbai | **Country:** India | **Website:** https://mu.ac.in/

DIGITAL SKILLS

Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation / generative ai / AI image generation / LLM models / Deep Learning / Git / Docker / vision language model / RAG system / Python / Deep Learning frameworks: PyTorch,Tensorflow,Keras / Machine learning / Natural language Processing / Git & Githubs / Computer VIsion / TABLEAUE / Platform : AWS Cloud / Scikit-Learn / Machine Learning / Databases: MySQL, MariaDB, PostgreSQL, MongoDB / Statistical techniques

CERTIFICATIONS

NISM-Series-VIII: Equity Derivatives Certification

Affective Computing

Affective computing is a field in computer science and artificial intelligence that focuses on creating systems and devices capable of recognizing, interpreting, and responding to human emotions.

Link: https://archive.nptel.ac.in/content/noc/NOC24/SEM1/Ecertificates/106/noc24-cs12/Course/NPTEL24CS12S36230024030380879.pdf

LANGUAGE SKILLS

Mother tongue(s): Marathi | Hindi | English

Other language(s): Spanish

PROJECTS

Fine-tuning Stable Diffusion Model on a Custom Dataset In this project, we aimed to enhance the capabilities of a Stable Diffusion model by fine-tuning it on a custom dataset of textile patterns. The goal was to improve the model's ability to recognize and generate high-quality, detailed textile designs, which can be highly beneficial for the fashion industry.

Link: https://github.com/Adityag009/Fine_tunning_image_generation_model

Vision-Language Models for Textile Design Description In this project, we explored the capabilities of multiple Vision-Language models to generate detailed descriptions for textile design images. By testing and comparing models on a diverse dataset of textile patterns, we aimed to automate the process of creating accurate and rich descriptions. The project highlights the potential of Vision-Language models in enhancing content generation and improving the efficiency of design documentation in the fashion industry.

Link: https://github.com/Adityag009/Vision_language_models

Stable Diffusion Inpainting for Product Photography Write here the descripThis project involved utilizing the Stable Diffusion inpainting method to transform ordinary product photos into high-quality, professional product photography images. By applying advanced inpainting techniques, we enhanced the visual appeal of the products, making them suitable for marketing and promotional purposes.

Link: https://github.com/Adityag009/Image_generation/blob/main/Inpanting.ipynb

PowerPoint Presentation Elements Detection Developed a solution for automated detection of elements in PowerPoint presentations using YOLOv8. Trained the YOLOv8 segmentation model, refining its ability to identify and classify elements. The project contributes to content analysis, slide categorization, and PowerPoint automation

Link: https://github.com/Adityag009/SlideObjectRecognition

Image Classification Project Developed a machine learning model for classifying images, demonstrating proficiency in neural network architectures and deep learning. Conducted thorough data preparation including image preprocessing and dataset splitting into training, validation, and test sets. Designed and implemented a neural network using TensorFlow and Keras, focusing on convolutional layers and optimized for high accuracy. Employed advanced techniques like data augmentation and fine-tuning to improve model performance and prevent overfitting. Analyzed model performance using accuracy metrics and loss functions; achieved 97% accuracy on the test dataset.

Resume Optimization Suite The Resume Optimization Suite is an advanced tool designed to boost resume effectiveness and interview preparedness. It leverages cutting-edge language models to generate tailored interview questions based on the content of the provided resume. Additionally, the suite performs an in-depth analysis of the resume against a given job description, highlighting areas that require attention or enhancement.

Movie Recommendation System Developed a movie recommendation system using text vectorization and tags, employing various machine learning techniques to analyze movie data and generate tags for each movie based on its genre, cast, and other relevant features.

Link: https://github.com/Adityag009/Movie-TV-Shows-Recommendation-system-

Web Scraping with Selenium in Python Developed a Python script using Selenium for web scraping LinkedIn job details, extracting and analyzing data to create CSV files.

Link: https://github.com/Adityag009/Web-Scraping-uning-selenium-in-python

Machine Learning for Hotel Reservation Predictions Developed and applied machine learning models to predict hotel reservation cancellations, showcasing expertise in data analysis and algorithm selection for improved business operations.

Link: https://github.com/Adityag009/Exploring-Hotel-Reservation-Dataset-Predicting-Customer-Cancellations-using-Machine-Learning-Techni

Metabolic Syndrome Analysis Using ML and DL This project entailed a comprehensive analysis of Metabolic Syndrome, focusing on risk factors for cardiovascular diseases and type 2 diabetes. Utilizing Python, the project incorporated extensive Exploratory Data Analysis (EDA) to uncover data patterns and relationships. Advanced machine learning and deep learning techniques were applied, with CatTreeClassifier yielding the highest accuracy. The project demonstrated the effective use of data science in medical research, offering valuable insights into complex health conditions.

Link: https://github.com/Adityag009/Metabolic-Syndrome

Maharera Real Estate Agent Scraper Utilized Python, BeautifulSoup, and Selenium to develop a web scraper for extracting comprehensive real estate agent data from the Maharera website. Implemented filtering by city, providing detailed insights into the real estate sector across various regions of Maharashtra. Data output was structured into CSV format for ease of use in further analysis.

HOBBIES AND INTERESTS

Stargazing

Reading books

Trekking and Hiking

Traveling

Swimming

Cycling

Trading