Priti Yadav

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Linkedin • Github • Web Resume

Objective

To be part of tech development and to create innovative solutions that push the boundaries of what has been achieved before.

Professional Experience

Full Stack Developer/ Co-Founder, AI Butler Apr 2023 – N/A

- Development of a plugin using Express.js, Axios, and Cheerio to fetch and process web page content.
- Utilization of LangChain's LLMChain and OpenAI's Curie model for text summarization
- Integration of OCR and NER techniques for improved page content understanding
- Frontend implementation with Angular for user-friendly interaction
- Parameter tuning and optimization to enhance summarization accuracy.
- Error handling for cases where no text is found, or processing fails.
- API endpoints for summarizing web pages and retrieving the summary.
- Interactive prompt template to present the generated summary to users.
- Continuous improvement and refinement of the summarization process based on user feedback.

Full Stack Developer, AlphaCor Sustainability Solutions Limited Jun 2023 – N/A

- Creating user role restriction-based bulk message broadcast system for multi-tier system
- Implements business logic for sending emails or notifications to specified recipients.
- Logs broadcast activities and manages message limits.
- Responsible for designing and structuring the message broadcast page UI.
- Handles user input for subject, message, and attachment.
- Manages form submission and interaction with the backend.
- Implements client-side form validation.
- Implements a protected route component that ensures only authenticated users can access the broadcast page.
- Storing bulk email log data.
- Defines the data structure and schema for bulk email log entries.
- Handles the HTTP requests for broadcasting messages(APIs).
- Troubleshooting deployment issues
- SSL certificate renewal was performed on the AWS EC2 instance to ensure secure communication.
- Technologies Used: React, @mantine/core, styled components, React Router. Express.js, AWS SDK (SES, SNS, SQS), MongoDB. Mongoose
- Project access

Student Researcher, WIMTACH, Toronto. Mar 2022 - Aug 2022

- Led full software development lifecycle for a multi-tiered web service project for energy consumption and carbon emissions, including client communication and project management.
- Created minimum viable product for startup- MVP Access
- Developed an e-commerce marketplace system for trading carbon offsets among SMEs.
- Implemented gathering of functional requirements and technical specifications.
- Ensured security with JWT token validation and AWS Cognito
- Utilized AWS SDK throughout.
- Wrote unit and integration tests for Node.js (TypeScript) backend application in Jest.
- Participated in Agile project management by outlining analytical requirements and translating them into conceptual designs.
- Established criteria or standards for basic infrastructure and deployment processes.
- Conducted data analysis and scrutinized processes and codes to identify and troubleshoot issues and identify opportunities for enhancements.
- Designed and deployed an automated algorithm for the project.
- Created a modularized control unit for internal purposes and ensured regular upkeep and updates as necessary.
- Experience with QA Manual Testing.

Software Developer Intern, LetsStopAids, Toronto Sep 2021 - Dec 2021

- Designed responsive web templates in Flutter for the volunteer sign-up program.
- Ensured website compatibility and attractiveness across platforms with Flutter and parallax effects.
- Work responsibilities were of website designer and web developer.
- Worked with object-oriented design tools and UML.

Projects

1. Book Recommender (open source): I have developed a Book Recommendation web application that leverages the OpenAI GPT-2/3/4 models to provide personalized book suggestions based on a user's mood and their current reading preferences. The application allows users to enter a book name and select their mood from a dropdown list. Using the Flask framework, the backend processes the user's input, interacts with the OpenAI API to generate book recommendations, and fetches book details from the Google Books API. The MongoDB class is used to store user data, including their reading history and recommendations.

   Tech Stack Used - Python, Flask, OpenAI API, Google Books API, Gunicorn, MongoDB, HTML, CSS, JavaScript, Heroku
   Project Access

2. Python Package (Open source)- I initiated and led the development from inception to version 0.1.2. The package provides a convenient way to visualize Scikit-learn machine learning pipelines, leveraging libraries like NetworkX, Matplotlib, and Plotly. It generates clear, interactive, and insightful visual representations of ML pipelines, allowing users to better understand data flow and transformations. The package supports Scikit-Learn's Pipeline, FeatureUnion, and ColumnTransformer classes and is accompanied by comprehensive documentation. I also

implemented interactive HTML visualization for easier analysis. Users can install the package via pip, and contributions are encouraged through GitHub's issue tracking and pull requests.

Tech Stack Used - Python, NetworkX, Matplotlib, Plotly, setuptools, numpy, and scikit-learn
Project Access

3. Python Package (Open source)- - I developed a Python class that extracts insights from PDF and DOCX documents using NLP and ML models like GPT-2/3/4. It performs document loading, sectioning, semantic similarity checks for relevant questions, and API request handling to provide accurate and meaningful answers to user queries.

   Tech Stack Used: Python, numpy, docx, WordCloud, requests, PyPDF2, sentence_transformers, transformers, pdfplumber, tqdm, matplotlib, pathlib, pdf2image, nltk, nltk.corpus, nltk.tokenize, stopwords, pytesseract, and layoutparser.
   Project Access

4. Housing Vacancy Rate vs Population: I collected and merged two datasets: one containing population data for various provinces in Canada over the years, and the other containing housing vacancy rate data for the same provinces and years. I then calculated the percentage changes in population and vacancy rates for each province over time and conducted a correlation analysis to examine the relationship between these two variables. The analysis revealed a weak negative correlation between population and vacancy rates. To visualize the trends, I created line plots using Plotly, displaying the changes in population and vacancy rates over the years for each province. Additionally, I plotted boxplots to identify potential outliers in the data. This project sheds light on how population dynamics may influence housing vacancy rates in different provinces across Canada.

   Tech Stack Used - Python, Pandas, NumPy, Plotly, Matplotlib, Seaborn, HTML, CSS
   Project Access

5. Canada vs US Mortgage Arrears: I analyzed Canadian and U.S. residential mortgage arrears and foreclosure rates from 2002 to 2012. Data was extracted from an Excel file on GitHub using pandas and visualized using line plots to observe trends. I calculated the correlation between Canadian and U.S. mortgage arrears rates. Time series decomposition was performed to understand underlying components. The ARIMA model was used to forecast mortgage arrears rates for the next five years separately for Canada and the U.S. Results were visualized with historical data and forecasts.

   Tech Stack Used - Python, pandas, NumPy, Matplotlib, Seaborn, Requests, io.BytesIO, statsmodels.tsa, ARIMA
   Project Access

6. Random Gradient Template Generator: In this project hosted on Heroku, I created a Flask web application that generates customizable resume templates. The application uses the Faker library to generate random data for the resume, such as name, job title, skills, experiences, and website. The generated data is combined with HTML and CSS templates to create visually appealing resumes. Users can download their personalized resumes as a ZIP file containing an HTML file along with associated CSS and JS files. The application also randomly assigns colors to the resume for a unique look.

   Tech Stack Used- Flask, Faker, randomcolor, zipfile, io, so, Heroku, HTML, CSS, and JavaScript.
   Project Access

Licenses & Certifications

- Getting Started with Python - University of Michigan
- Python Data Structures - University of Michigan
- Using Python to Access Web Data - University of Michigan
- Using Databases with Python - University of Michigan
- Capstone: Retrieving, Processing, and Visualizing Data with Python - University of Michigan
- Exploratory Data Analysis for Machine Learning – Coursera
- Working towards Google's Generative AI certification

Education

1. Advanced Ontario College Diploma in Software Engineering - Artificial Intelligence, Centennial College, Toronto
   Projects - Image Classification, Sentiment Analysis, Handwritten Digit Recognition, Spam Email Detection, Loan Default Prediction, Customer Segmentation, House Price Prediction, Image to text (OCR+NER), Performance analysis on brain cancer data among supervised leaning, unsupervised learning, and state of the art deep learning models.

2. B. Tech in Electronics & Communications Engineering, UTU, India