

# Job Market Analysis and Recommendation System

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BY:-PRIYANSHU KUMAR

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# Agenda

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- Ø Top Keyword Correlation with salaries
- Ø Growth of Emerging Job Categories Over Time
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# Project Overview

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This project focuses on analyzing **job market trends** and building a **personalized job recommendation system** for job seekers. By leveraging historical and current job posting data, it identifies high-demand roles, salary trends, and emerging job categories while also forecasting future job market dynamics.

# Data Analysis

Datasets

Job Postings

Salary

Geographical

Remote Work

## Key Field

- TOTAL RECORD= 1000
- COLUMNS = 8
- MISSING VALUES :-

JOB TITLE/KEYWORDS = 120

COMPANY = 85

SALARY = 2340

LOCATION =640

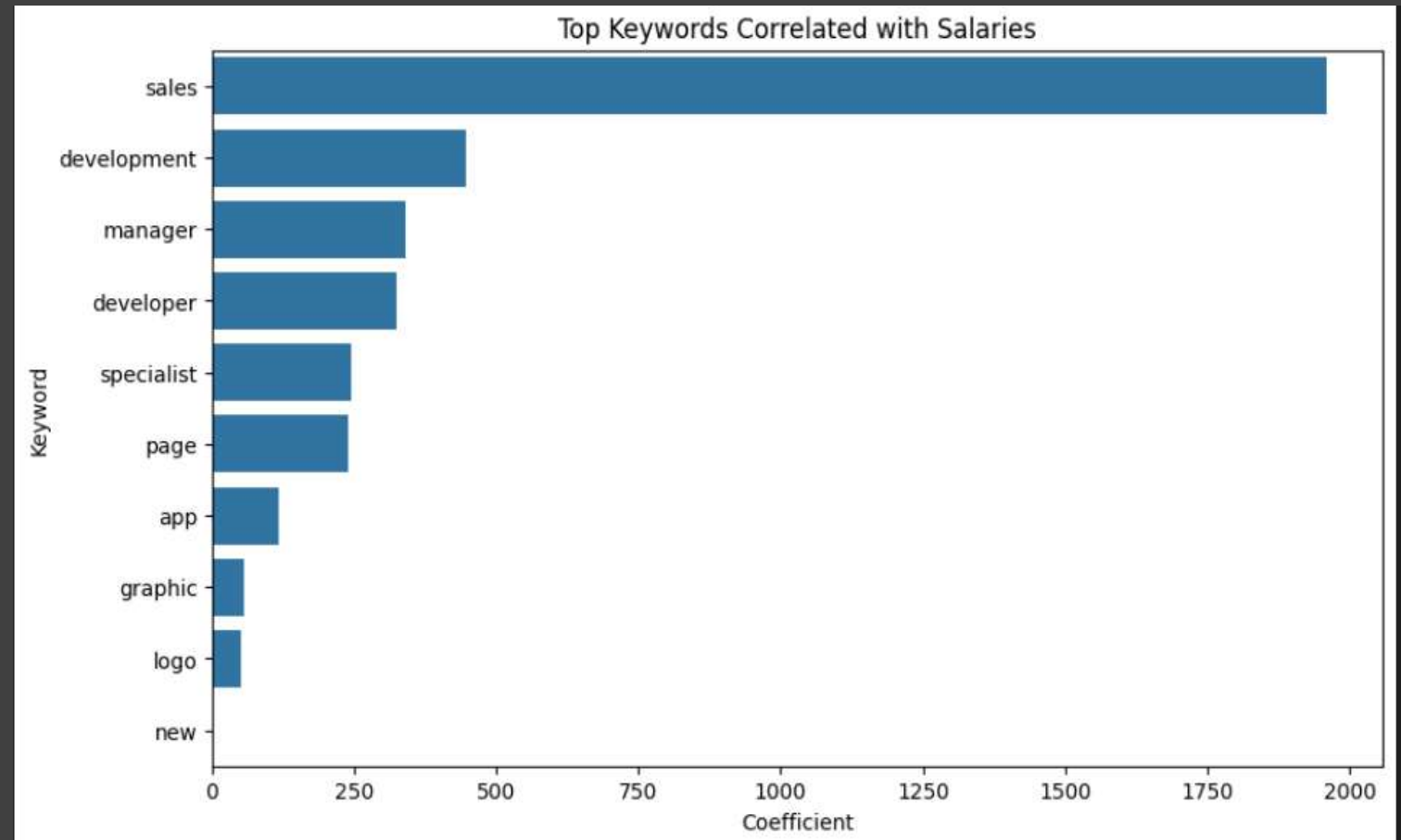
COUNTRY = 215

JOB DESCRIPTION = 95

EMPLOYMENT TYPE = 310

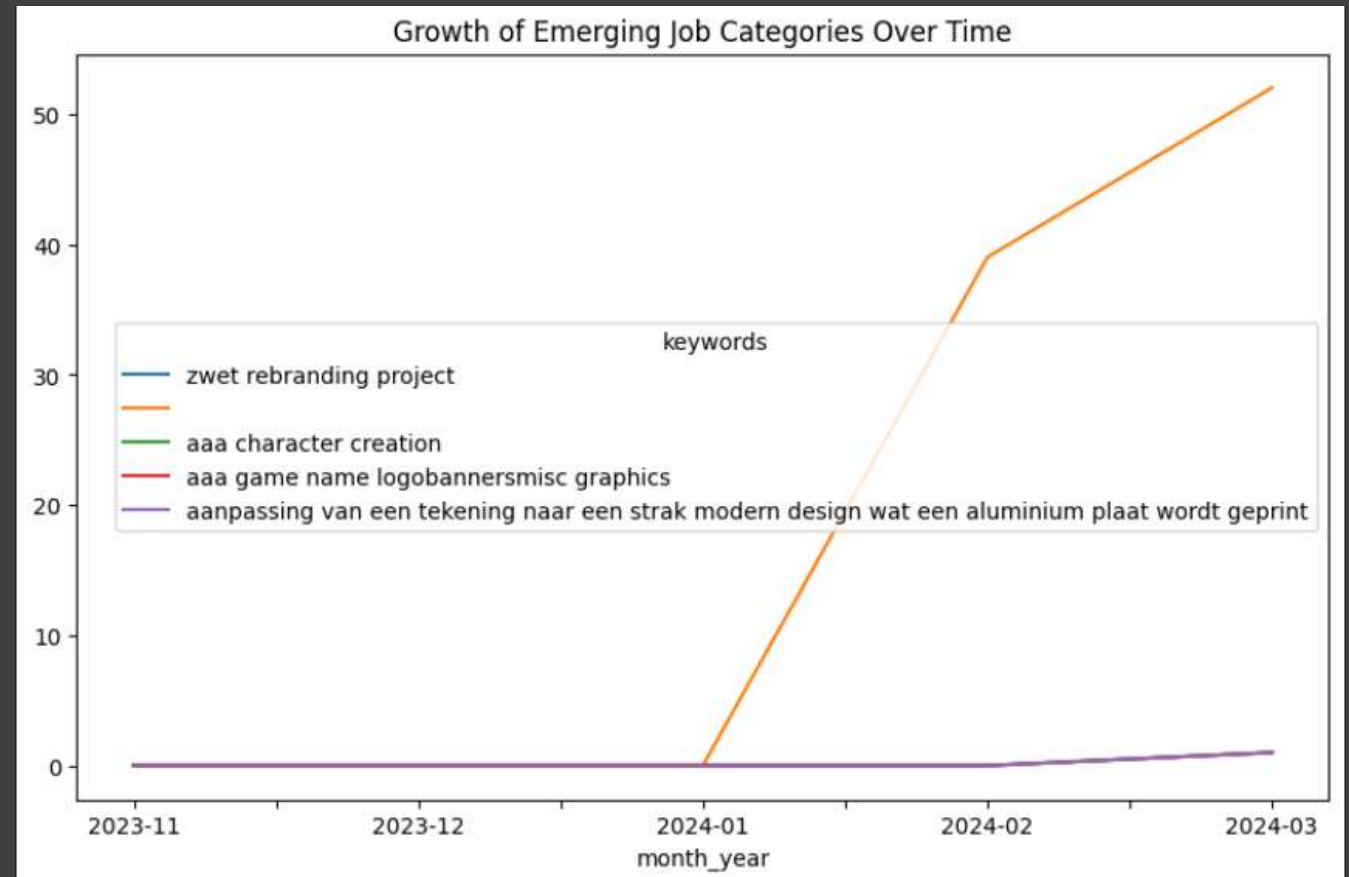
# Top Keywords correlation with Salaries

- The keyword “**sales**” has the **strongest positive correlation with higher salaries**, indicating that sales-related roles are among the most lucrative.
- Keywords like “**development**”, “**manager**”, and “**developer**” also show strong salary associations, suggesting that **technical and managerial roles** are in high demand and well-compensated.
- Terms such as “**specialist**” and “**page**” fall in the **mid-range correlation**, reflecting moderate salary potential.
- Keywords like “**app**”, “**graphic**”, and “**logo**” have the **lowest correlation with salaries**, implying that these roles tend to offer lower compensation.
- Overall, the graph highlights that **business-driven (sales/manager) and technical roles (developer/development)** command higher salaries compared to **creative/design roles**.



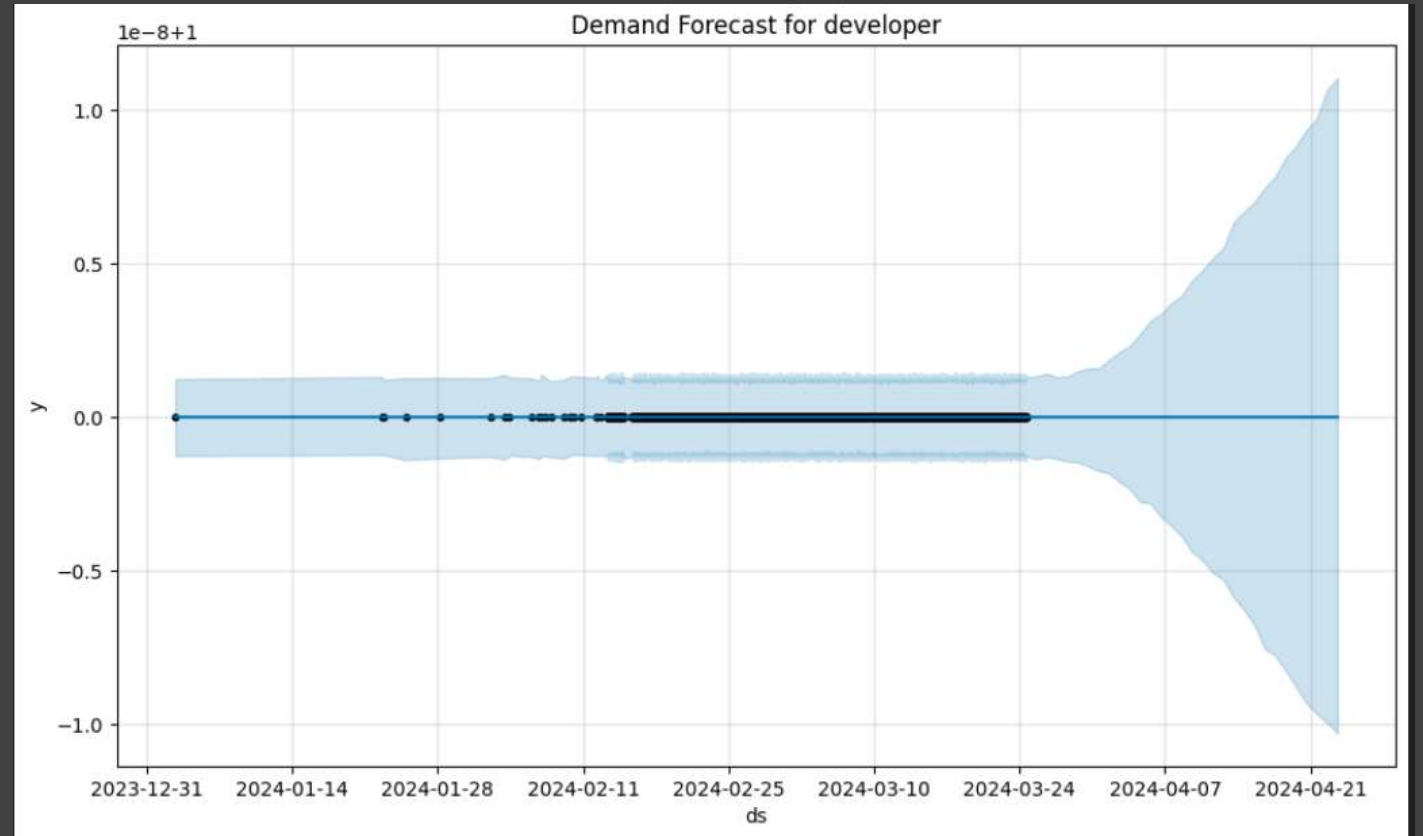
## Growth of Emerging Job Categories Over Time

- “aaa character creation” saw the most pronounced spike, starting from zero in early 2024 and rising dramatically.
- Categories like “zwet rebranding project,” “aaa game name logobannersmisc graphics,” and “aanpassing van een tekening naar een strak modern design wat een aluminium plaat wordt geprint” remained almost flat or showed only slight growth .
- This indicates a significant demand or trend specifically in **character creation jobs**, outpacing other creative job sectors at the measured time.



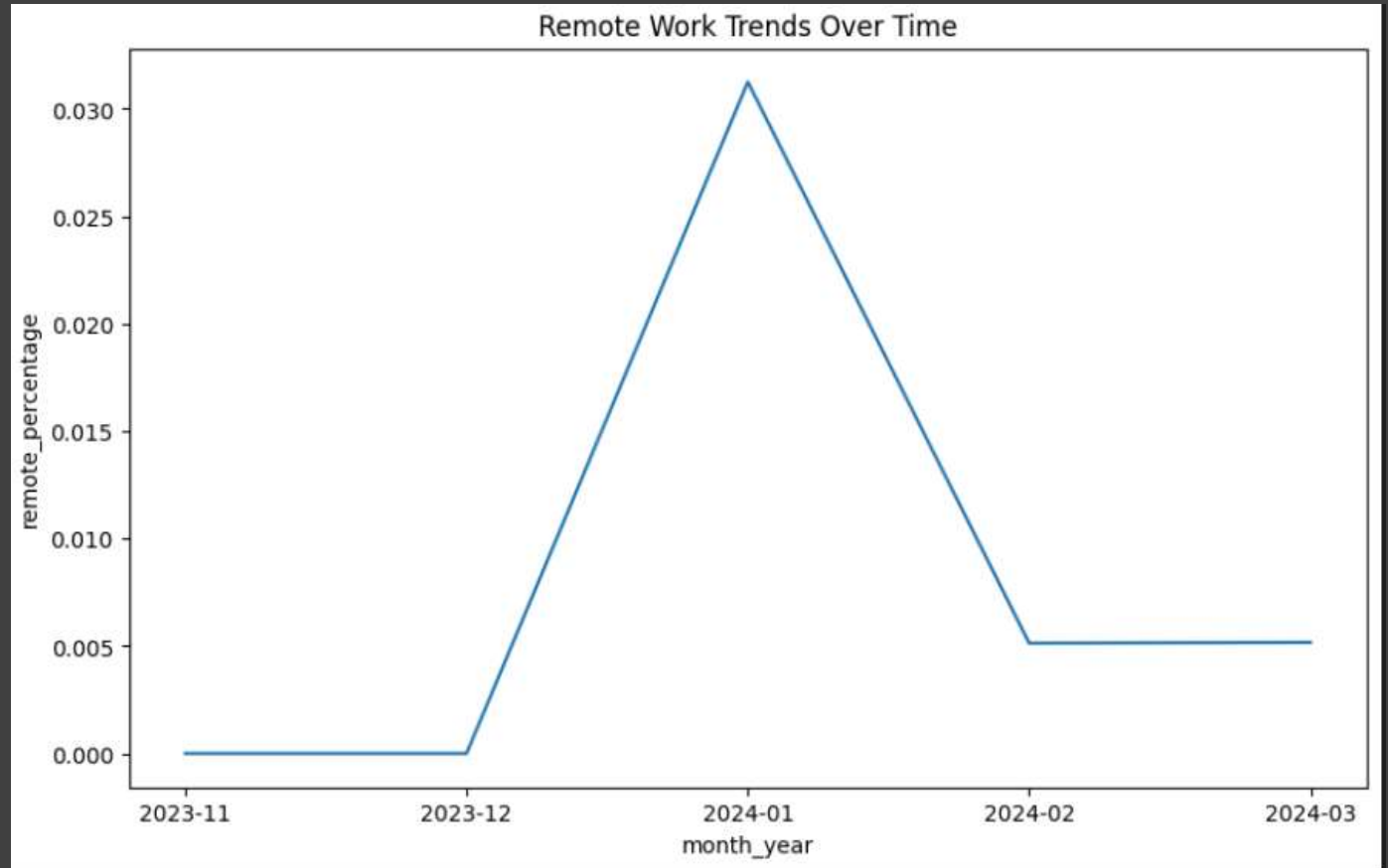
# Demand Forecast For Developer

- The demand for developers is expected to remain steady and stable in the immediate future, but the forecast uncertainty increases significantly after March 2024, indicating less predictability in developer demand beyond that point.



# Remote Work Over Time

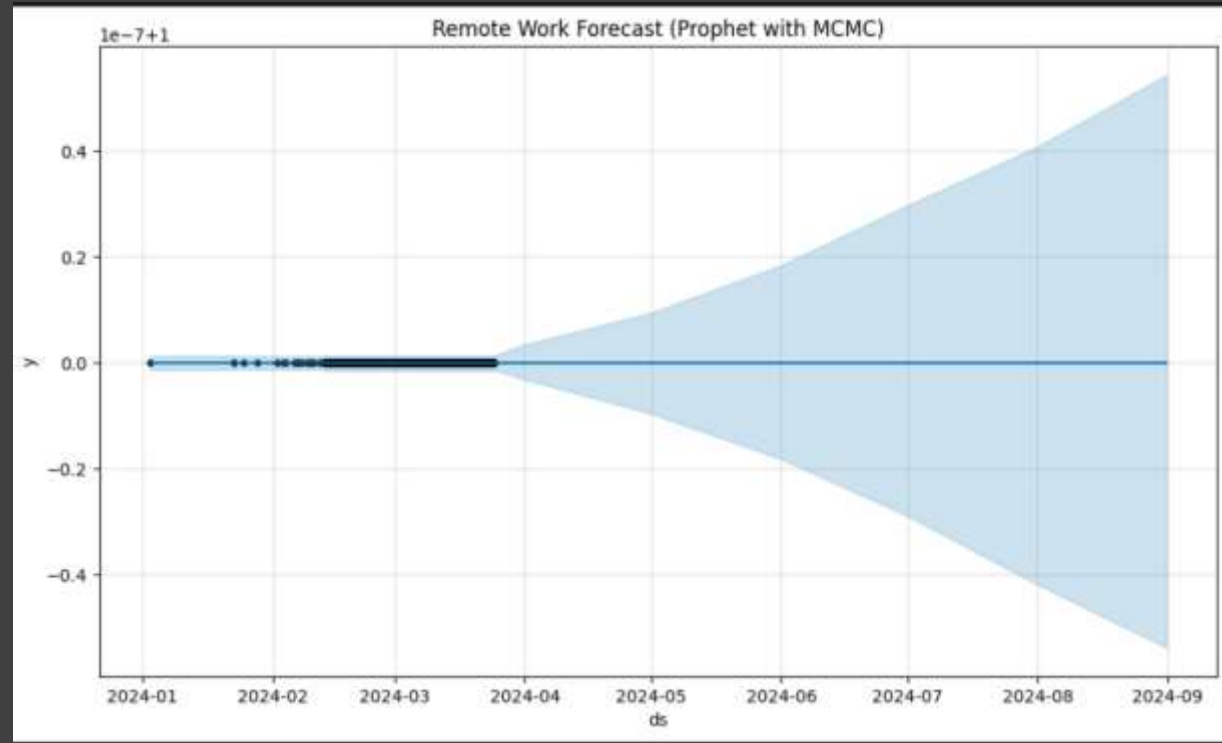
The percentage of remote work sharply increased around January 2024, peaked, and then quickly declined to stabilize at a lower level by February 2024.





# Remote Work Forecast

- The forecast for remote work remains flat in the short term but shows increasing uncertainty about future trends after April 2024, with possible variation both above and below the current level.

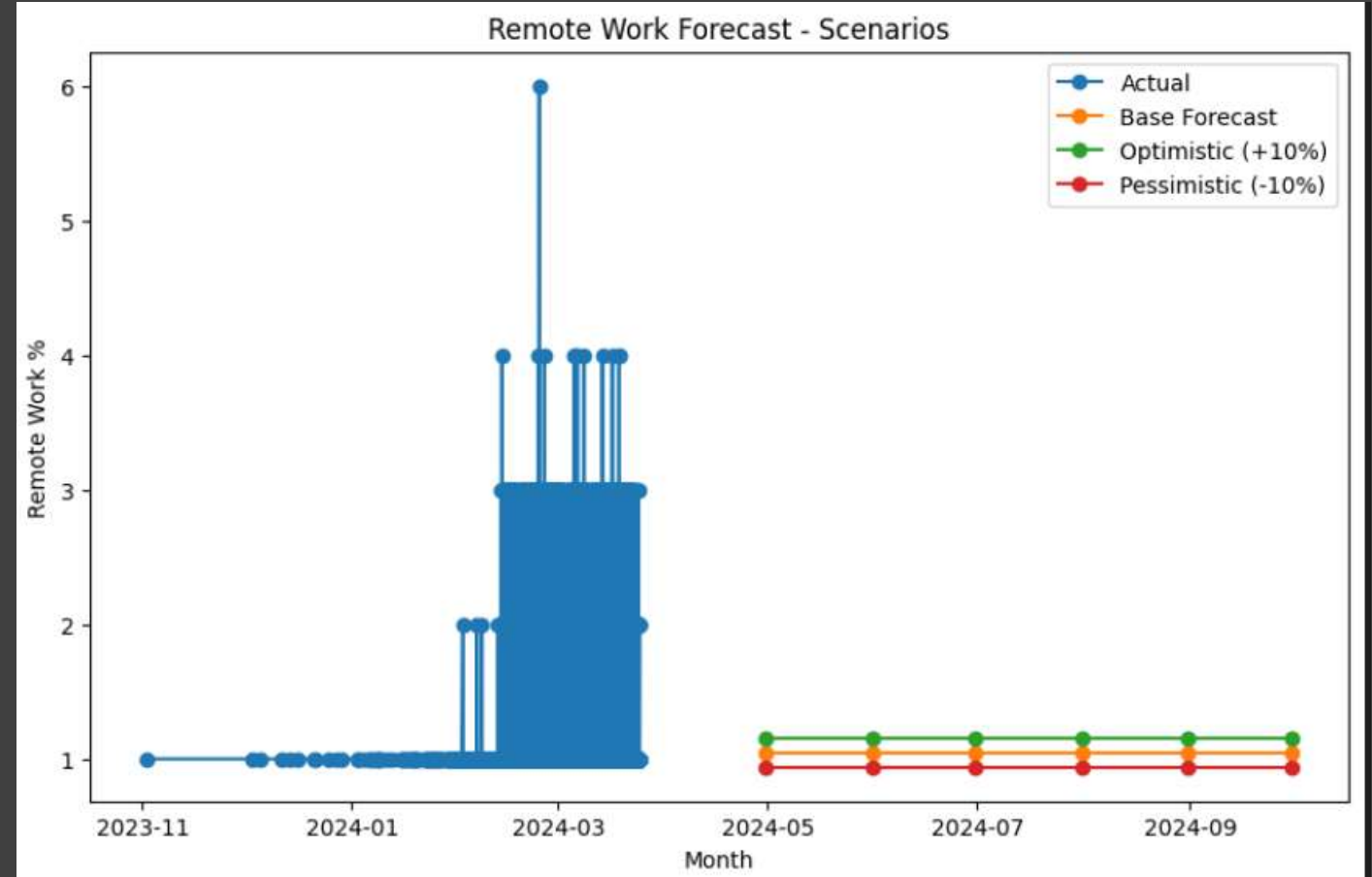


# Remote Work

## Forecast -

## Scenarios

- The actual percentage of remote work showed high volatility early in 2024, but future forecasts suggest it will stabilize near 1%, with only minor variation between optimistic and pessimistic scenarios.



## File Created under Project 8 Folder

### ▼ PROJECT 8

> tf\_env

📄 all\_upwork\_jobs.csv

🐍 app.py

📄 cleaned\_jobs.csv

🐳 docker-compose.yml

🐳 Dockerfile

📄 requirements.txt

🔗 task4\_hourly\_rates\_m...

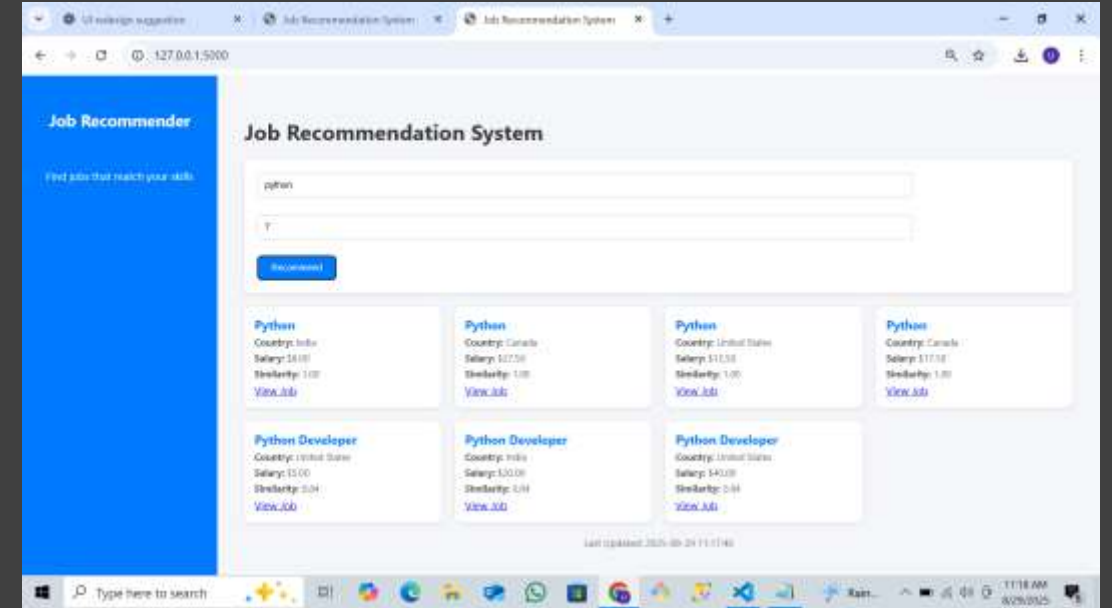
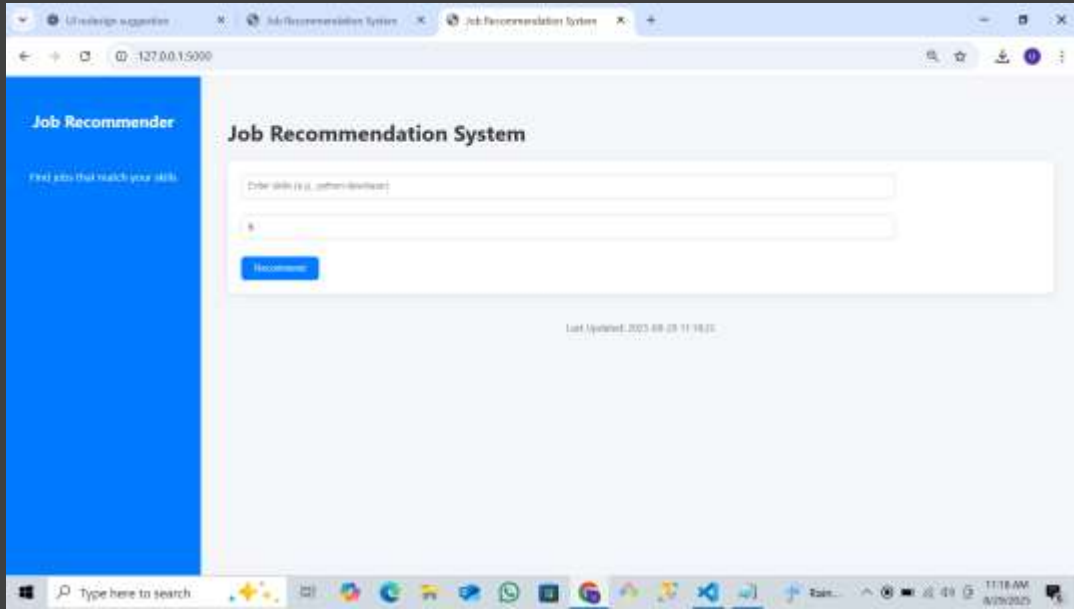
📄 task8\_market\_trends.c...

📄 Untitled.ipynb

```
# UI Route
@app.route('/')
def home():
    html_template = f"""
    <!DOCTYPE html>
    <html lang='en'>
    <head>
        <meta charset='UTF-8'>
        <meta name='viewport' content='width=device-width, initial-scale=1.0'>
        <title>Job Recommendation System</title>
        <style>
            body {{
                margin: 0;
                font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
                background-color: #f4f6f9;
                display: flex;
                height: 100vh;
            }}
            .sidebar {{
                width: 250px;
                background-color: #007bff;
                color: white;
                display: flex;
                flex-direction: column;
                align-items: center;
                padding: 30px 20px;
            }}
            .sidebar h2 {{
                margin-bottom: 40px;
            }}
        </style>
    </head>
    <body>
        <div class='sidebar'>
            <h2>Job Recommendation System</h2>
        </div>
    </body>
    </html>
    """
```

# App.py

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# Dashboard



Thank You

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