

# SurveySparrow Round - 2 Task

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## **AI-Powered Sales Development Representative (SDR) Email Outreach System**

### **Methodology**

This project involves creating an AI-driven email outreach system designed for Sales Development Representatives (SDRs). The system aims to automate and optimize email outreach by leveraging various technologies, including OpenAI for content generation and optimization, Streamlit for user interaction, and FastAPI for backend services. The methodology includes four key steps:

1. **Prospect Research:** Uses OpenAI and Meta Llama to generate a research report on the prospect and their company based on the input provided by the user (prospect name and company).
2. **Email Generation:** Based on the research and the uploaded product catalog, the system generates an initial email draft that highlights the product's features and benefits.
3. **Email Optimization:** The generated email is optimized using successful email templates provided by the user, enhancing its quality and ensuring it aligns with proven outreach strategies.
4. **Email Sending:** Finally, the optimized email is sent to the recipient via a configured SMTP server.

### **Findings**

- **Prospect Research:** The OpenAI API effectively generates detailed research reports that provide personalized insights into the prospect, making the email content more relevant.
- **Email Generation:** By incorporating both research and product catalogs, the generated email aligns closely with the prospect's needs and the product's key selling points, improving the likelihood of engagement.
- **Optimization:** The use of existing successful templates further strengthens the email by refining its tone, structure, and overall appeal.

- **Streamlining:** Automating these steps significantly reduces manual effort, allowing SDRs to focus on higher-value tasks such as personalized follow-ups.

## **Recommendations**

1. **Enhance Research Accuracy:** Incorporating more external data sources (e.g., LinkedIn, company websites) can improve the quality and relevance of the research report.
2. **Improve Email Personalization:** Adding more customizable variables (e.g., prospect's pain points or market trends) to the email generation process could increase response rates.
3. **Security:** Consider adding authentication mechanisms and improving error handling in the backend to ensure data integrity and secure email transmission.
4. **Future Enhancements:** Introducing A/B testing for email versions and feedback loops based on email open rates could further optimize email effectiveness.

## **Technologies Used:**

- **Meta Llama / OpenAI:** Content generation and optimization.
- **Streamlit:** User interface for interaction and input.
- **FastAPI:** Backend services for handling requests.
- **PyMuPDF:** For reading and processing PDF files.
- **SMTP:** For email transmission.

## **Exception:**

- **Meta LLaMA** as an Alternative to **Perplexity API:** Given that Perplexity API is a paid service, Meta LLaMA was chosen as a cost-effective alternative for content generation without sacrificing quality
- **OpenAI** as an Alternative to **ChatGPT:** OpenAI's free service was used for content generation, avoiding ChatGPT, which required a paid API key.