Internship Final Report

Student Name: Thrisha R

University: BNM Institute of Technology

Major: Computer Science

Internship Duration: August 1st, 2025 – August 31st, 2025

Company: ShadowFox

Domain: Python

Mentor: Mr. Hariharan

Coordinator: Mr. Aakash

Objectives

My primary objectives for this internship were to:

- Gain practical exposure to writing efficient code using real-world problem statements.
- Explore Python applications in areas like file handling, web scraping, and natural language processing.

Tasks and Responsibilities

During the internship, I was actively engaged in the following tasks:

- **Beginner-Level Programs**: Solved problems involving variables, numbers, lists, conditional statements, and loops. These exercises helped me practice core concepts such as data types, logic flow, and iteration.
- **Web Scraping (Intermediate)**: Implemented a scraper using *BeautifulSoup* to extract information from webpages, handle errors gracefully, and save the data for later use.
- **AI-driven NLP Project (Advanced)**: Experimented with two language models, *GPT-2* and *DistilBERT*. Explored their text generation and classification capabilities, compared outputs, and analysed their strengths and limitations.

Learning Outcomes

- **Technical Skills:** Strengthened my command over Python basics, file handling, and open-source libraries like *BeautifulSoup, Hugging Face's Transformers.*

- **Applied Knowledge:** Gained hands-on experience in web scraping and NLP, bridging classroom learning with real-world applications.

- **Problem-Solving:** Improved my debugging approach, logical thinking, and ability to handle different scenarios in coding.

- **Professional Growth:** Learned how to structure code, manage tasks on GitHub, and present outcomes in a systematic way.

Challenges and Solutions

- **Debugging Errors:** Faced issues with syntax and logic in beginner tasks, which I resolved by testing small code blocks and using Python documentation.

- **NLP Model Complexity:** Understanding the outputs of *GPT-2* and *DistilBERT* was initially overwhelming, but I overcame this by studying tutorials and running experiments on smaller text inputs before scaling.

Conclusion

My internship at ShadowFox was an enriching experience that enabled me to move beyond theoretical learning into practical implementation of Python. By working on tasks ranging from simple exercises to advanced projects in NLP, I built both confidence and technical proficiency. This experience has strengthened my interest in Python development and its applications in data analysis and artificial intelligence.

Acknowledgments

I sincerely thank **ShadowFox**, my mentor **Mr. Hariharan**, and coordinator **Mr. Aakash** for their constant guidance and support throughout the internship. I would also like to acknowledge **LinkedIn** as the platform through which I came across this valuable opportunity. This internship has been a significant step in my personal and professional growth, allowing me to gain practical skills and real-world exposure in Python development.