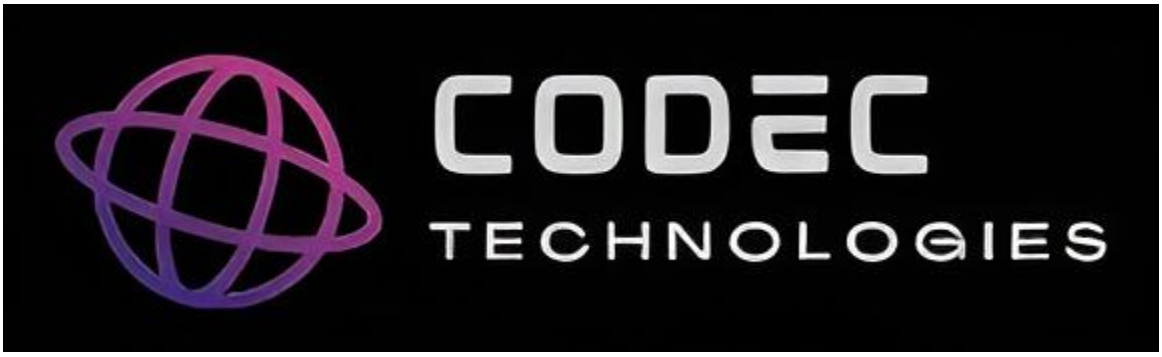
INTERNSHIP REPORT

ON

PYTHON DEVELOPER INTERNSHIP

Submitted in partial fulfillment of the requirements of

Industry Internship Training



Submitted by,

MD SAMIUR RAHMAN TANIM

Assam down town University

B. Tech (CSE), 5th Semester

Internship Company

CODEC TECHNOLOGIES

Mumbai, Maharashtra 400076

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DECLARATION

I, **MD SAMIUR RAHMAN TANIM**, bearing Roll No. **ADTU/0/2023-27/BTCS/212**, hereby declare that this internship report titled "**Python Developer Internship** at **Codec Technologies**" is an original record of the work carried out by me during the **1-Month Python Developer Internship** at **Codec Technologies**. The projects and tasks described in this report, including the **Real-Time Stock Market Dashboard** and **Automated Resume Parser**, were completed by me under the guidance provided during the internship period. This report has not been submitted to any other institution or organization for any academic or professional purpose and reflects my own learning and experience gained during the internship.

MD SAMIUR RAHMAN TANIM

Enrolment ID: ADTU/0/2023-27/BTCS/212

Semester: 5th Semester

Program: B. Tech (Computer Science & Engineering)

Faculty of Computer Technology

Assam down town University

Guwahati

ACKNOWLEDGMENT

I would like to express my sincere gratitude to **Codec Technologies** for providing me with the opportunity to complete my **1-Month Python Developer Internship** and gain valuable industry exposure. I am thankful to the mentors and team members at Codec Technologies for their guidance, support, and encouragement throughout the internship period. Their continuous feedback and practical insights helped me understand real-world software development, improve my Python programming skills, and successfully complete the assigned projects. I also extend my thanks to my faculty members of **Assam down town University** for their support and motivation during this internship. Finally, I am grateful to my family and friends for their constant encouragement and support throughout this learning journey.

ABSTRACT

This report presents a detailed account of the **1-Month Python Developer Internship** completed at **Codec Technologies**, which aimed to provide practical exposure to real-world software development using Python. The internship focused on strengthening core Python concepts, working with live and unstructured data, and understanding industry-level development practices. During the internship, two major projects were successfully developed: a **Real-Time Stock Market Dashboard**, which displays live stock data using API integration, and an **Automated Resume Parser**, designed to extract and organize important information from resumes. These projects helped in gaining hands-on experience with API handling, data processing, text extraction, automation, and version control using GitHub. The internship enhanced problem-solving ability, coding discipline, and technical confidence, while also providing insight into professional workflows and project implementation. Overall, this internship served as a valuable learning experience and contributed significantly to the development of practical Python programming skills.

1. INTRODUCTION

Internships play an important role in connecting academic learning with real-world industry practices. The **Python Developer Internship at Codec Technologies** provided an opportunity to apply theoretical knowledge of programming into practical, real-time applications. This internship was designed to enhance core Python skills, improve logical thinking, and introduce industry-level development workflows. During the internship period, emphasis was given to hands-on learning through project development, problem solving, and self-implementation. By working on real-world projects such as a **Real-Time Stock Market Dashboard** and an **Automated Resume Parser**, the internship helped in understanding data handling, automation, API integration, and structured coding practices. Overall, the internship served as a valuable platform for gaining practical experience, improving technical confidence, and preparing for future roles in software development.

2. INTERNSHIP OVERVIEW

The **Python Developer Internship** was conducted at **Codec Technologies** for a duration of **one month** with the objective of providing practical exposure to Python-based software development. The internship focused on strengthening programming fundamentals, understanding real-world problem solving, and developing functional applications using Python. Throughout the internship period, learning was primarily project-oriented, allowing hands-on experience in working with APIs, data processing, automation, and version control. Regular guidance and self-learning played an important role in completing assigned tasks and projects. The internship environment encouraged independent implementation, logical thinking, and clean coding practices, helping to build confidence in developing complete Python applications. Overall, the internship offered valuable insight into industry workflows and enhanced technical and professional skills.

3. Company Profile (Codec Technology)

Codec Technologies India is a technology-focused organization that provides training, development, and industry-oriented learning solutions in the field of software and emerging technologies. The company aims to bridge the gap between academic knowledge and practical industry requirements by offering skill-based programs, internships, and real-world project exposure. Codec Technologies emphasizes hands-on learning, structured mentorship, and modern development practices to help students and professionals build strong technical foundations and career-ready skills.

The headquarters of Codec Technologies is located at **211B, Saki Vihar Road, West Chandivali IT Hub, Powai, Mumbai, Maharashtra – 400076**. To support its operations across different regions of the country, the company also maintains regional offices in major technology hubs. The **South Region Office** is situated at **Hansur Road, Koramangala, Bengaluru, Karnataka – 560095**, while the **North Region Office** is located at **Jodhpur Gam Road, Ahmedabad, Gujarat – 380015**. This regional presence allows the company to reach a wider audience and provide effective support and training services across India.

Codec Technologies is a recognized organization with official registrations and certifications, reflecting its credibility and professional standards. The company holds **NCS ID: E19E86-011658828892** and is certified under **ISO Certificate No: 230422081967QRA**, ensuring quality management and standardized operational practices. Additionally, Codec Technologies is registered with **AICTE (ID: CORPORATE6759d549ce59e1733940555)**, which highlights its compliance with national educational and training guidelines.

Through structured internship programs such as the **Python Developer Internship**, Codec Technologies provides learners with practical exposure to real-world projects, industry tools, and professional workflows. The organization focuses on developing technical competence, problem-solving ability, and industry readiness, making it a valuable platform for students seeking hands-on experience and career growth in the software development domain.

4. INTERNSHIP OBJECTIVES

The primary objective of the **Python Developer Internship at Codec Technologies** was to gain practical experience in Python programming and understand its application in real-world software development. The internship aimed to strengthen core programming concepts, improve logical thinking, and enhance problem-solving skills through hands-on project work. Another key objective was to learn how to work with real-time data, APIs, and unstructured information while following clean and structured coding practices. The internship also focused on developing familiarity with industry tools, version control systems, and professional workflows. Overall, the objective of the internship was to build technical confidence, practical knowledge, and industry readiness for future roles in software development.

5. Project 1: Real-Time Stock Market Dashboard

5.1 Project Overview

The Real-Time Stock Market Dashboard is an interactive dashboard web application built using **Python**, **Streamlit**, and **Plotly** to visualize live stock market data and technical indicators. The application fetches real-time price data from the **Alpha Vantage API** and displays it in an easy-to-use interface, allowing users to enter stock symbols (like AAPL, TSLA, MSFT) and view up-to-date trends, price charts, and financial indicators such as Moving Averages and RSI. This project was developed during the **Python Developer Internship at Codec Technologies** to demonstrate the ability to integrate APIs, handle live data, and build responsive dashboards using modern Python tools.

GitHub Repository: https://github.com/CodeWithTanim/real-time-stock-market-dashboard

5.2 Problem Statement

In financial analysis, it is often difficult for users and beginners to access and understand live stock data without using complex tools or multiple websites. Traders, analysts, and learners need a single interface where they can track real-time stock prices, view technical indicators, and analyze trends quickly without deep familiarity with financial systems. This project solves the problem by providing a simple, automated, real-time visualization platform that consolidates stock data and key indicators into one user-friendly dashboard.

5.3 System Description

The system is designed as a **web application** running locally using Streamlit, which handles both input and output in an interactive browser interface. Users enter a stock ticker symbol, and the application connects to the **Alpha Vantage API** to retrieve live stock price data. The backend functions fetch the stock price and compute technical indicators like Moving Averages (MA) and Relative Strength Index (RSI). The frontend uses Plotly charts embedded in Streamlit to display dynamic visualizations, updating at periodic intervals when new data is fetched. This combination allows real-time analysis and visualization of financial data in an easy, interactive format.

5.4 Tools and Technologies Used

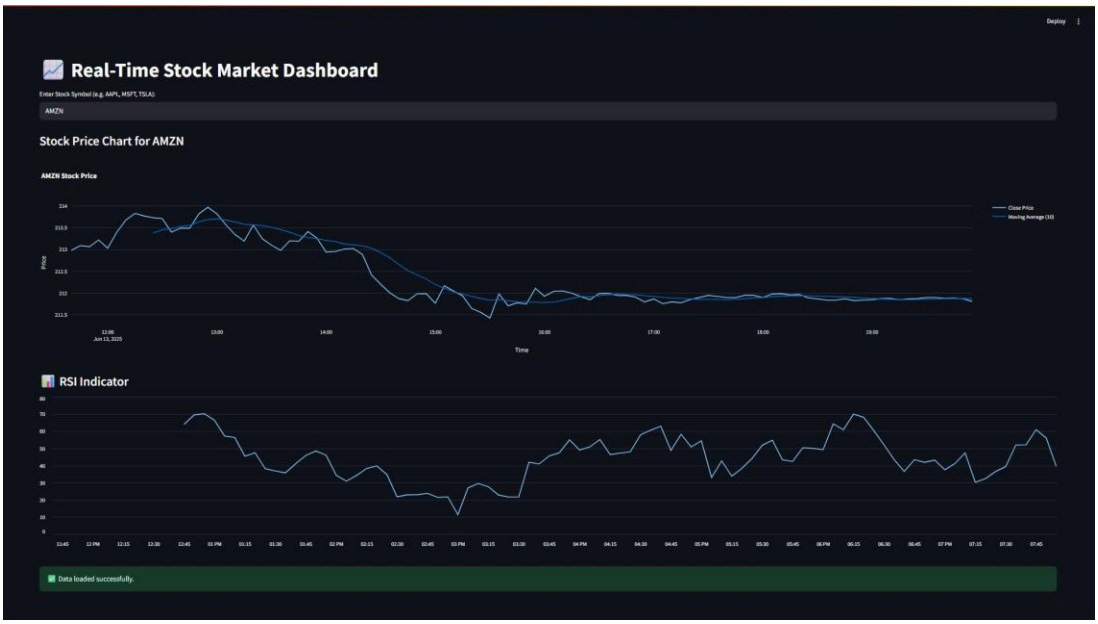
The following tools and technologies were used in this project: **Python** served as the core programming language. **Streamlit** was used to build the interactive UI dashboard. **Plotly** provided powerful and responsive charts for data visualization. The **Alpha Vantage API** supplied real-time stock data. Additional Python libraries such as Pandas were used for data processing, and configuration files managed the API key for secure access. Together, these technologies enabled a full stack Python-based real-time dashboard solution.

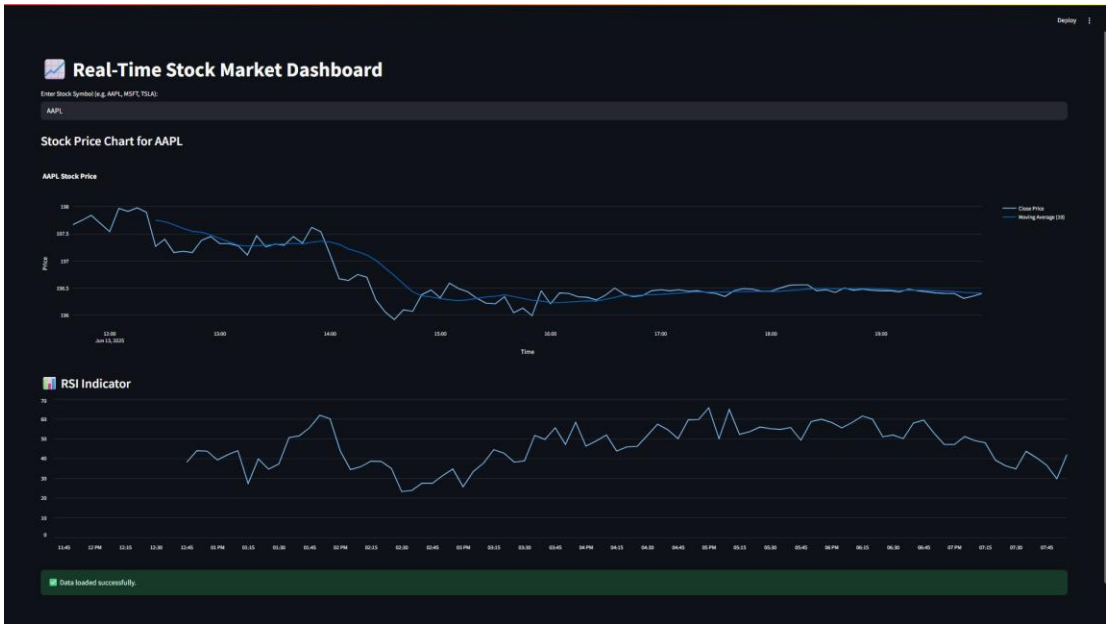
5.5 Implementation Details:

The implementation started by setting up the project directory and installing the necessary dependencies listed in the requirements.txt file, including Streamlit, Plotly, and Pandas. An API key from Alpha Vantage was used and stored in a configuration file (config.py) to authenticate stock data requests. The main application logic was written in app.py, which handles user input, API calls, technical indicator calculations, and rendering charts. Supporting utility modules such as stock_api.py fetched data from Alpha Vantage, while indicators.py contained functions to compute Moving Averages and RSI. When running the application, Streamlit serves the dashboard in a web browser, continuously updating charts based on the latest fetched data.

5.6 Output and Results

The dashboard successfully displays real-time stock price information and financial indicators in an interactive format. Users can enter any valid stock ticker symbol to view updated price charts, including intraday price movements and computed technical indicators such as Moving Averages and RSI. The visualizations are clear and responsive, providing meaningful insight into market trends at a glance. Screenshots can be added to show the live dashboard interface and charts for different stock examples, which enhances the visual presentation of the results.





6. Project 1: Real-Time Stock Market Dashboard

6.1 Project Overview

The **Automated Resume Parser** is a Python-based application developed to automatically extract important information from resumes and convert unstructured resume data into a structured and readable format. The system is designed to process resumes in common formats such as PDF and text files and extract key details including candidate name, email address, phone number, skills, and experience-related information. This project was developed during the **Python Developer Internship at Codec Technologies** to understand real-world automation, text processing, and data extraction challenges commonly faced in recruitment systems. The project demonstrates how Python can be used to automate repetitive tasks and improve efficiency in human resource management.

GitHub Repository: https://github.com/CodeWithTanim/automated-resume-parser

6.2 Problem Statement

In recruitment processes, HR teams often need to manually review and analyze a large number of resumes, which is time-consuming and inefficient. Resumes are usually submitted in different formats and layouts, making it difficult to extract consistent information manually. This manual process increases the chances of errors and delays in shortlisting candidates. The problem addressed by this project is the lack of an automated and reliable system to quickly extract relevant candidate information from resumes and organize it in a structured manner for further analysis.

6.3 System Description

The Automated Resume Parser works as a Python application that takes resume files as input and processes them using text extraction and pattern-matching techniques. The system reads resume documents, converts them into raw text, and then applies logical rules and regular expressions to identify and extract important fields such as name, email ID, phone number, and skills. The extracted information is then displayed in a structured format, making it easy to review and use for further processing. The system is flexible and can handle variations in resume formats, which makes it suitable for real-world use cases.

6.4 Tools and Technologies Used

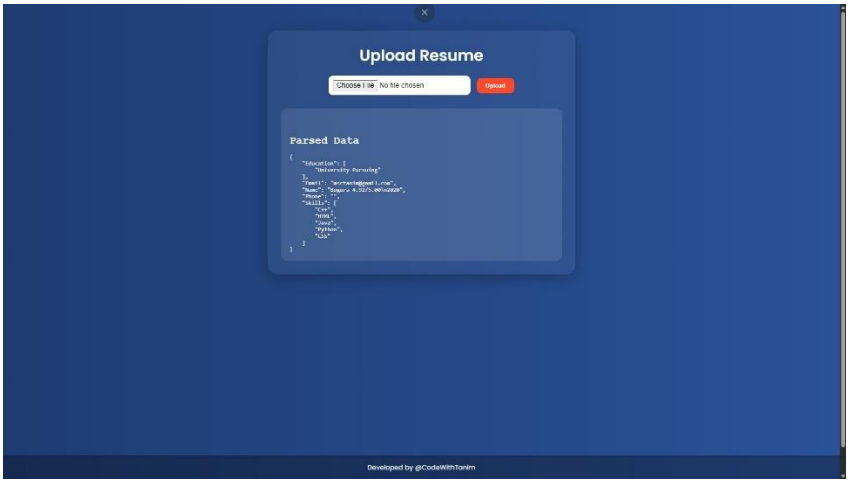
This project was implemented using **Python** as the primary programming language. Python libraries were used for file handling, text extraction, and data processing. **Regular Expressions (Regex)** were used to identify patterns such as email addresses and phone numbers within resume text. Libraries for handling PDF and text files were used to read resume content efficiently. **GitHub** was used for version control and project management, ensuring proper documentation and code organization throughout development.

6.5 Implementation Details:

The implementation began with setting up the Python environment and organizing the project structure. The application first accepts a resume file as input and determines its format. If the resume is in PDF format, the content is extracted and converted into plain text. After text extraction, predefined logic and regular expressions are applied to detect specific information such as contact details and skills. The extracted data is stored in variables and displayed in a clean, readable output format. Proper error handling was implemented to manage unsupported file formats and incomplete resume data. The modular structure of the code makes the system easy to extend and improve in the future.

6.6 Output and Results

The Automated Resume Parser successfully extracts key candidate information from resumes and presents it in a structured and organized format. The output includes details such as candidate contact information and identified skills, reducing the need for manual resume screening. The system improves efficiency and accuracy in resume analysis and demonstrates the practical application of Python in automation and text processing.



7. LEARNING OUTCOMES

The Python Developer Internship at Codec Technologies provided valuable practical exposure to real-world software development using Python. Through hands-on project work, this internship helped in strengthening core Python programming concepts and improving logical and analytical thinking. Working on projects such as the Real-Time Stock Market Dashboard enhanced understanding of API integration, real-time data handling, and data visualization techniques, while the Automated Resume Parser project improved skills in text processing, automation, and handling unstructured data.

The internship also helped in developing clean coding practices, modular program design, and effective debugging skills. Exposure to GitHub for version control improved project organization and documentation habits. Additionally, the internship enhanced problem-solving ability, self-learning skills, and confidence in building complete applications independently. Overall, the internship successfully contributed to technical growth, industry awareness, and readiness for future software development roles.

8. CHALLENGES FACED AND SOLUTIONS

During the Python Developer Internship at Codec Technologies, several challenges were encountered while working on real-world projects. One of the major challenges was handling real-time data from external APIs in the stock market dashboard, as API responses were sometimes delayed or inconsistent. This issue was addressed by implementing proper error handling, validating responses, and optimizing data fetching logic to ensure smooth and reliable performance. Understanding API documentation and managing API keys securely was also a learning challenge that was resolved through careful configuration and testing.

Another challenge faced was processing resumes with different formats and layouts in the Automated Resume Parser project. Since resumes do not follow a fixed structure, extracting accurate information such as skills and contact details required careful logic and pattern matching. This challenge was overcome by using flexible text extraction techniques and regular expressions, along with testing the system on multiple resume samples. Additionally, debugging and optimizing the code to handle edge cases improved overall system accuracy. Through continuous practice, guidance, and self-learning, these challenges were successfully resolved, leading to improved technical confidence and problem-solving skills.

9. Tools, Technologies and Platforms Used

During the Python Developer Internship at Codec Technologies, a variety of tools, technologies, and platforms were used to design, develop, and manage the assigned projects efficiently. **Python** was used as the primary programming language due to its simplicity, flexibility, and wide library support. For the Real-Time Stock Market Dashboard, **Streamlit** was used to create an interactive web-based user interface, while **Plotly** was utilized for dynamic data visualization. External APIs, such as stock market data APIs, were integrated to fetch real-time financial data. Libraries like **Pandas** were used for data processing and manipulation.

For the Automated Resume Parser project, Python libraries for file handling, text extraction, and pattern matching were used. **Regular Expressions (Regex)** played a key role in extracting structured information such as email addresses, phone numbers, and skills from unstructured resume text. **GitHub** was used as a version control platform to manage source code, track changes, and maintain proper project documentation. **Visual Studio Code (VS Code)** served as the primary development environment throughout the internship. These tools and technologies collectively helped in building scalable, efficient, and real-world Python applications while following industry-standard development practices.

10. Conclusion and Future Scope

The **Python Developer Internship at Codec Technologies** provided valuable practical experience in applying Python programming to real-world problems. Through hands-on project development, the internship strengthened core programming skills and improved understanding of data handling, automation, API integration, and visualization. The successful completion of the **Real-Time Stock Market Dashboard** and **Automated Resume Parser** projects demonstrated the effective use of Python in building functional and industry-relevant applications.

In the future, these projects can be enhanced by integrating advanced features such as machine learning for predictive analysis in stock trends and improved accuracy in resume data extraction using natural language processing techniques. Overall, the internship helped build technical confidence, industry awareness, and a strong foundation for future software development roles.

11. REFERENCES

a) Python Software Foundation, *Python Documentation*. Available at: https://docs.python.org

b) Streamlit Inc., *Streamlit Documentation*. Available at: https://docs.streamlit.io

c) Plotly Technologies Inc., *Plotly Python Documentation*. Available at: https://plotly.com/python/

d) Alpha Vantage, *Stock Market API Documentation*. Available at: https://www.alphavantage.co

e) GitHub Repositories of Internship Projects, Available at:
https://github.com/CodeWithTanim/real-time-stock-market-dashboard
https://github.com/CodeWithTanim/automated-resume-parser

f) Codec Technologies, *Official Website*. Available at: https://codectechnologies.in/