**EXECUTIVE SUMMARY**

My internship is regarding "Data Science," So I make Communication with skillDzire Company and asked to provide a one-month internship in Data Science. The SkillDzire company interrogated me about My Educational background and my college, Siddartha Educational Academy Group of institution, and asked me to provide a permission letter from the college. I have provided all the requirements to the company. After verification of all documents, SkillDzire provided me with an internship in Data Science with an offer letter through the mail. skillDzire company provided many internships in Cyber Security, Data Science, Artificial intelligence, Machine Learning, Deep Learning, Blockchain, and Full stack Java. I have asked them to provide an internship in Data Science.

The main objective of the Data Science Internship is to get the basic knowledge about Data science, use Tools for data science, and use data science to analyze datasets in real-time. Using Data Science, it is very easy to analyze data even if it is very large in size.

**OVERVIEW OF THE ORGANIZATION**

My internship was in Data Science at skillDzire Company, which is located in Hyderabad Telangana, India, but I did an internship in remote mode from Tirupati.

SkillDzire is India's leading, Realtime Learning platform, where students get trained by industry experts along with certifications. SkillDzire offers 65+ Courses and Internships for students and also LIVE & Recorded Sessions with a Course Completion certificate.

SkillDzire has more than 15,000 Enrolled students, more than 450 Industry connections, and more than 70 Industry Experts to train the students who are enrolled for the courses in skillDzire. SkillDzire has Industry experts from Intel, Cyient, gm, LT, TATA, and many more. skillDzire was Recognized by the government of India, starupindia, and AP Skill Development Corporation and more than 450 Companies Hired skillDzire students.

**INTERNSHIP PART**

My internship was started by receiving a letter from the skillDzire Company through the mail. They have provided me with a login id and password to access Recorded classes on Data Science. After receiving access to the Recorded classes. I started going through Recorded classes. In Recorded classes, The Industry experts trained me in Data Science from a basic level and also learned about Tools used in data science. There are Many Tools used in Data Science. But Industry expert has chosen Python as a tool for data science because of its easy understandability and learning. easy to code and also write.

The industry experts also trained me in coding in Python from a basic level. After Completing all recorded classes by industry experts. They have conducted two assignments for Data Science Internships. After completing two assignments I received an Internship Completion certification from SkillDzire. I enjoyed and learned a lot in Data Science Internship.

**ACTIVITY LOG FOR THE FIRST WEEK**

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| --- | --- | --- | --- |
| **Day & Date** | **Brief Description of the Daily Activity** | **Learning outcome** | **Person-In-Charge Signature** |
| **Day 1** | Learned Data Science Definition, Types of Data Science, Types of Data, Type of Analysis, Life cycle of Data Science, Application of Data Science. | Basic knowledge of Data Science. |  |
| **Day 2** | Learned about the software used to execute Python to implement Data Science like, IDE, COLAB, SPYDER, etc. | An idea on tools used for Data Science. |  |
| **Day 3** | Learned about Python, Python installation, Features of Python, and Tokens of Python. | An idea on Python at the basic level. |  |
| **Day 4** | Learned about operators in Python. | Able to perform operations in Python using operators. |  |
| **Day 5** | Learned about control statements in Python including Decision-making statements, Loop statements, and Special statements. | Able to implement control statements in Python |  |
| **Day 6** | Learned about functions in Python including Types of functions, Types of function arguments, Scope of the function variables, and Recursive Functions. | Capable to implement functions in Python. |  |

**Week -1 –** To know about the internship

At the start of the internship, we have no idea about the internship in data science. so, I went through the instructions and guidelines given by JNTUA and selected the domain for my internship. I planned on an overview of the internship so that the approach towards the internship can be easier. Hence the overview and overall plan play a major role in the internship completion.

I selected a plan which suits best for my internship. I take permission from college officials to do an internship. College officials also encouraged and helped me a lot to do this internship. As a part of week-1, I learned a lot about Data Science including the Definition of Data Science, Types of Data Science, Types of Data, Types of Analysis, Life cycle of Data Science, and Applications. On Day-2 of week-1, I Learned about the software used to execute Python to implement Data Science like, IDE, COLAB, SPYDER, etc. On day-3 of week-1, I Learned about Python, Python installation, Features of Python, and Tokens of Python.

On day-4 of week-1, I learned about operators in Python, and on day-5 of week-1, I Learned about control statements in Python including Decision-making statements, Loop statements, and Special statements. On day-6 of week-1, I Learned about functions in Python including Types of functions, Types of function arguments, Scope of the function variables, and Recursive Functions.

**ACTIVITY LOG FOR THE SECOND WEEK**

|  |  |  |  |
| --- | --- | --- | --- |
| **Day &\ Date** | **Brief Description of the Daily Activity** | **Learning outcome** | **Person**  **In-charge**  **Signature** |
| **Day 1** | Learned about packages, Modules, and Functions. | The idea on Modules, Packages. |  |
| **Day 2** | Learned about Data structure in Python, Types of Data Structures, and Strings. | Basic knowledge of Data structures in Python |  |
| **Day 3** | Learned about List, Sets, Dictionaries, and Tuple. | Knowledge of Lists, Sets, and Tuple |  |
| **Day 4** | Learned about files in Python, how to write, read, and append information in the file using Python. | An idea on file operations in Python. |  |
| **Day 5** | Learned about regular expressions and re-module. | A knowledge of Regular Expressions. |  |
| **Day 6** | Practiced How to develop an employee payroll slip program in Python. | An idea on program development |  |

**Week 2-** Complete idea on Python

After completing the first work, I started the Second week of the Day by learning with packages, Modules, and Functions. The industry expects to have also explained the concept of Packages, and Modules with the best example. The package is a combination of \_init\_.py and modules of Python. On Day-2 of the Second week, I learned about Data Structures in Python, Types of Data structures including Predefined Data structures and user-defined data structures. On Day-3 of the Second week, I learned about Lists, Sets, tuples, and dictionaries. There is a small difference in each of them.

On Day-4 of the Second week, I Learned how to perform operations on files using Python. The operations are Write, Read, Append, etc. Using write(), read(), and append() operations we can write the data, read the data, and update the data into the file respectively. On Day-5 of the Second week, I learned about Regular expressions and re-modules. Using the re-modules and regular expressions we can extract starting or ending or any part of the string as like as we want. As it is important to know on Day-6 I Learned and practiced How to develop an employee payroll slip in Python.

**ACTIVITY LOG FOR THE THIRD WEEK**

|  |  |  |  |
| --- | --- | --- | --- |
| **Day & Date** | **Brief Description of the Daily Activity** | **Learning outcomes** | **Person**  **In-charge**  **Signature** |
| **Day 1** | Learned exception handling in Python. | Basic knowledge of exception Handling. |  |
| **Day 2** | Learned DBMS and SQL Commands implementation in Python. | An idea on DBMS and SQL Commands. |  |
| **Day 3** | Learned Object Oriented Programming in Python including Class, Object, Abstraction, and more. | An idea on Object Oriented Programming. |  |
| **Day 4** | Learned Numpy in Python, Operations on Numpy, and Real-life Examples of Numpy. | Having an idea on Numpy in Python. |  |
| **Day 5** | Learned Pandas in Python, Operations performs on pandas, series, DataFrame, and its applications. | To have a solid knowledge of Pandas. |  |
| **Day 6** | Learned Statistics, Types of Statistics including Descriptive & Inferential Statistics, Skewness, and Correlation. | To have an idea of Statistics implemented using Python. |  |

**Week 3-** To learn Object Oriented programming in Python.

In the Third week, I started Day 1 by learning Exception handling, Types of Errors, and Types of Exception handling including Predefined Exception Handling and User defined Exception Handling. I also got knowledge on the usage of try, expect, else, and finally in Exception Handling. On Day 2, I learned DBMS, the Limitations of a flat file system, the Requirements of DBMS, and SQL commands. I also learned how to implement SQL commands Using Python. On Day 3, I learned Object Oriented Programming in Python which contains Objects, Class, Inheritance, Polymorphism, and Exception Handling. Also learned the implementation of object-oriented programming in Python.

On Day 4, I learned Numpy in Python, Examples of Numpy, Real Examples of Numpy, and its applications. It is similar to an array. On Day 5 I Learned about Pandas. It is a package in Python. Series and DataFrame are also part of Pandas. The Applications of Pandas. Operations of Pandas and Examples of Pandas. On day 6, I learned Statistics using Python including Descriptive Statistics and Inferential Statistics.

**Work environment experienced.**

I did my internship from home so, my work environment experience is work from home, The main advantage of working from home is Flexibility. Flexibility is one of the significant advantages of Working from home. I have the freedom to set my own schedule. It allows me to balance personal and professional responsibilities more effectively. I can also switch my work hours to my most productive Hours. No Reduced Commute Stress, working from home does not Have commute stress. It Eliminates commute stress from work. Many individuals find that they are more productive when working from home. In the same way, I am also more productive while I am working from home by creating an environment that suits my preferences and work style, which can boost my productivity. Even I also have fewer distractions and interruptions from colleagues and family members.

By working from home, I have Improved my Work-Life Balance. Working from home allows for better integration of work and personal life. I have the flexibility to take breaks when needed, attend to personal matters, and spend time with my family. While during this internship I met many communication and collaboration challenges. For communication purposes, I have used email, chat platforms, video conferences, and project management software. When I am working from home on my internship sometimes it leads to feelings of isolation. The absence of direct contact with colleagues sometimes I feel lonely. Finally, I come to know that self-discipline plays an important role in the internship.

**Managerial skills acquired**

In a work-from-home internship, acquiring and developing certain managerial skills have greatly enhanced my performance and contributed to my professional growth. The main important managerial skill to focus on in an internship during working remotely requires strong self-discipline and the ability to manage my time effectively. Setting clear goals, creating a schedule, and prioritizing tasks to stay organized and meet deadlines. I Enhanced my written and verbal communication skills to ensure clarity. Utilized appropriate communication channels, such as email, instant messaging, or video conferencing, to stay connected. I Developed skills for remote collaboration by actively participating in virtual meetings.

Finally, I Developed problem-solving skills to overcome challenges encountered during remote work. I learned to Seek solutions independently, and utilization of available resources effectively. I Practiced self-assessments to evaluate my performance and identified areas for improvement. I Familiarized myself with various digital tools and technologies commonly used in remote work settings. I Developed proficiency in virtual meeting platforms. I collaborated with colleagues, guides, and professionals through virtual events, social media, and professional networking platforms. I understood and adapted to the remote work culture of the skillDzire organization.

**Improving Communication Skills –**

One of the important qualities to improve Communication is Active listening. So, I used to listen actively to my colleagues, guides, and industry experts. I tried to express my thoughts clearly and concisely. I use appropriate language to convey my ideologies to my colleagues. Written communication is crucial in many workplaces. So, I Paid attention to grammar, punctuation, and spelling in your emails, reports, and other written communications. While coming to Nonverbal Communication, I am always aware of your body language, facial expressions, and tone of voice. I used appropriate gestures and modulated my voice to convey my message effectively. I always used to get feedback from my colleagues or guides on my communication skills. They have provided valuable insights and suggestions for my improvement in communication skills.

I always tried to use a collaborative communication style by encouraging open dialogue, seeking input from others, and valuing diverse perspectives. Effective communication varies based on the situation and audience. I tried to adapt my communication style to match the needs of different individuals. In this internship, I Developed emotional intelligence to better understand and manage my emotions. Emotional intelligence skill helps me to navigate conflicts, build relationships, and respond empathetically in challenging situations. I always take the opportunity to connect with colleagues, guides, and professionals. I believe that strong relationships enhance communication, open doors to new opportunities, and support my career growth.

**Enhancing the abilities in group discussions, participation in teams, contribution as a team member, and leading a team/ activity**

As my internship is virtual, the group discussions were held via video conferencing platforms such as Zoom, and Google Meet. During group discussions, actively listening to others’ ideas and perspectives gives me clarity. Paying attention to the details, and asking questions for clarification, shows our genuine interest in the internship.

To contribute as a team member, I Practiced conveying complex technical concepts concisely and understandably and used visual aids such as charts or diagrams when it is necessary for appropriate communication.

As a team member, I treat team members with respect and value their contributions. I always like a collaborative environment where everyone feels comfortable sharing their ideas and opinions. Similarly, I like to be open to receiving feedback from others and use it as an opportunity to grow.

In leading a team, I have actively collaborated in problem-solving discussions and decision-making processes. Decision-making is a very important skill for leading a team. When working in a team, I allocate tasks based on each team member's strengths and expertise effectively. As a team lead, I always establish deadlines and milestones to track progress.

**Observation of technological developments relevant to the subject area of training**

There are many technological developments relevant to the Data Science, among them Natural language processing has seen significant advancements in recent years. Models such as OpenAI's GPT-3 and Google's BARD have achieved state-of-the-art results in various NLP tasks, and question-answering. Deep learning models, such as Long Short-Term Memory (LSTM) networks and Wave Net, have shown promising results in capturing and making accurate predictions in domains.

The AI techniques aim to provide insights into how models make decisions and why specific predictions are made. AutoML tools have gained popularity in simplifying the process of model selection, hyperparameter tuning, and feature engineering. AutoML frameworks include Auto-sklearn, H2O.ai, and Google Cloud AutoML.

The Internet of Things (IoT) devices have generated vast amounts of data that require real-time analytics and decision-making. Cloud platforms and big data technologies continue to evolve, offering scalable infrastructure and distributed processing capabilities for handling large volumes of data. Reinforcement Learning: Reinforcement learning (RL) has made notable progress in recent years, particularly in areas such as robotics, gaming, and autonomous systems.