

Hello, my name is Samala Ritesh dhyana, and I'm thrilled to have the opportunity to introduce myself today. I am from Godavari Khani Telangana. I have completed my 10<sup>th</sup> standard in Shantiniketan Vidyalaya CBSE with 80% and I have completed my intermediate in Sri Chaitanya Educational Institutions with an aggregate of 95.5 and I am currently pursuing my B.Tech in MLRIT in the stream of Computer Science and Engineering with a specialization of Data Science with my current CGPA of 8.36.

Although I may be new to the professional world, I am eagerly waiting to apply the knowledge and skills I acquired during my education. I am a keen learner and volunteer in my college academics which made me learn some of the most popular programming languages i.e. Python and Java. In addition to that I have also learnt SQL and Web development as well. Furthermore, I have also pursued relevant certifications, including Java and Python from Unschool to further strengthen my knowledge and stay up to date. As I have already mentioned, I am also a video editor volunteer of SQUAD club which is the official data science club of MLRIT.

During my academic journey, I proactively tried my best for opportunities to enhance my skills and gain practical experience. I successfully completed a remote internship at Code Clause as a web development intern, where I had to create web applications based on their requirements.

I am particularly proud of my involvement in my academic micro project which is a chatbot. I was the team lead and this experience has enhanced my project management skills, enabling me to effectively collaborate with my team members and deliver a successful project.

Coming to my extra-curricular activities, I am genuinely interested in playing badminton. I enjoy a lot playing badminton. I am also interested in video editing and typing. I am more extroverted and I enjoy travelling and exploring places.

I am excited about the opportunity to contribute my skills, enthusiasm, and fresh perspectives to this organization. THANKYOU

## About DXC

DXC Technology was formed in April 1<sup>st</sup>, 2017 through the merger of Computer Sciences Corporation (CSC) and the Hewlett Packard Enterprise (HPE). At the time of its formation, Mike Lawrie became the Chairman, President, and CEO of DXC Technology.

DXC Technology is a global information technology services company that provides a range of solutions to help businesses and organizations transform and thrive in the digital age.

DXC Technology is a recognized leader in providing end-to-end IT services and solutions to clients across various industries, including healthcare, finance, manufacturing, and more.

The company operates at more than 70+ countries world wide with more than 130k+ employees across the world. DXC also has more than 200+ customers from various industries for their business needs.

The company is valued at more than \$25 billion, making it roughly the 110th largest company in the world.

DXC's clear values define the core values of the organization.

C - Client Focused

L - Leadership

E - Execution

A – Aspiration

R - Results

Why DXC?

I chose DXC Technology because of its reputation as a global leader in IT services and solutions.

The company's focus on innovation, industry-specific expertise, and commitment to digital transformation aligns perfectly with my career aspirations.

I'm excited about the opportunity to contribute to DXC's impactful projects and grow within a dynamic and forward-thinking environment.

Where do u see yourself in next 5 years?

As a fresher, in 5 years, I hope to become a highly skilled professional who has gained valuable experience and contributed to the growth of the company. I aspire to be respected for my works and to have advanced in my career. I am expecting to reach higher positions in the company and lead a team in making a successful project.

## Strengths and weakness

### Strengths :

- 1.Dedicated
- 2.Hard working
- 3.Team collaboration
- 4.High Attention towards my work

### Weakness

- 1.Nervous at public speaking
- 2.Overthinking

## Associate professional role

In the context of DXC Technology or any similar company, the term "associate professional duty" likely refers to the responsibilities and tasks assigned to individuals at the associate professional level within the organization. These duties typically correspond to the roles and job functions of individuals who are starting their careers or are at an early stage of their professional journey within the company.

1. **Learning and Development:** Associates at the professional level often engage in learning and training to build a strong foundation of skills and knowledge relevant to their roles. This can include training on company processes, industry-specific technologies, and professional development.
2. **Supporting Senior Professionals:** Associates may work closely with more experienced professionals to assist with tasks, projects, and initiatives. This collaboration helps them gain exposure to real-world scenarios and learn from seasoned colleagues.
3. **Executing Tasks:** Associates may be responsible for executing specific tasks or components of projects under the guidance of senior professionals. This could involve tasks related to programming, testing, data analysis, documentation, or other relevant activities.
4. **Contributing to Projects:** Depending on the department, associates might contribute to larger projects by completing assigned portions, conducting research, gathering data, or providing support in various project-related

aspects.

5. **Problem-Solving:** Associates often engage in problem-solving activities, identifying issues, proposing solutions, and assisting with troubleshooting under the supervision of experienced team members.
6. **Learning Company Processes:** Associates may learn about the company's internal processes, workflows, and protocols to ensure they adhere to company standards and contribute to streamlined operations.

Generally, an associate professional role is mostly assigned to employees who are at their early stages of their career.

They are asked to train themselves and then start developing their skills particularly on one domain. Supporting their senior professionals, contributing some to the project, problem solving skills, learning the company process, executing the tasks assigned to him /her.

I think I have done most of these roles in my academics. I personally trained my self about natural language processing and its back end and then I used this for my project chatbot, I always used to finish the tasks assigned to me on time such as assignments, projects etc. I also used to support my friends in executing their tasks personally in case of they require my presence or help.

I was also a team lead for my mini project and lead a team successfully towards the end of the semester. So, In this way I think I can see myself as an associate professional in DXC.

Native place.

I was born and brought up in Godavarikhani Telangana. The town is famous for its Singareni coal mines and the river Godavari which is just few kilometers away from the town. The town is also known as the city of coal in Telangana. The singareni mines started their mining initially in 1960s and are still continuing their mining tasks till toady it is almost 60 years.

The town is a combination of three different towns i.e NTPC, Ramgundam and Godavarikhani. All the coal which is mined in the coals reached to the Powerplant NTPC which produces 200MW of power and distributes the power across 5 states in India. The production of power in our town has become a

major source of power in India.

## Chatbot project

Chat bot[2] is an automated way of communication with the users in human understandable language. Chat bots[2] are programs built to automatically engage with received messages. Chat bots[2] can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning[7] to adapt their responses to fit the situation. The chat bot which we are building is a task oriented[2] chatbot

There are two main types of chat bots:

- Task-oriented (declarative) chat bots are single-purpose programs that focus on performing one function. Using rules, NLP, and very little ML, they generate automated but conversational responses to user inquiries. Though they do use NLP so end users can experience them in a conversational way, their capabilities are fairly basic. These are currently the most commonly used chat bots.
- Data-driven and predictive (conversational) chat bots are often referred to as virtual assistants or digital assistance and they are much more sophisticated, interactive, and personalized than task-oriented chat bots. They apply predictive intelligence and analytics to enable personalization based on user profiles and past user behavior. Digital assistants can learn a user's preferences over time, provide recommendations. In addition to monitoring data and intent, they can initiate conversations. Examples like apple's Siri and Amazon's Alexa. The chatbot which we are creating is a task oriented type.

## Natural Language Processing

We use Natural Language Processing to pre process the data before we train it to the machine. The essence of Natural Language Processing lies in making computers understand the natural language. That's not an easy task though. Computers can understand the structured form of data like spreadsheets and the tables in the database, but human languages, texts, and voices form an unstructured category of data, and it gets difficult for the computer to understand it, and there arises the need for Natural Language Processing. There's a lot of natural language data out there in various forms and it would get very easy if computers can understand and process that data. We can train the models in accordance with expected output in different ways

Steps involved :

1.Sentence Segmentation : Breaking down a para into sentences.

2.Tokenization : Breaking down the sentence into words.

3.Predicting parts of speech of each word : Predicting whether the word is a noun, verb, adjective, adverb, pronoun, etc. This will help to understand what the sentence is talking about.

4.Lemmatization : The goal of lemmatization is to transform different inflected or derived forms of a word into a common base form, making it easier to analyze and compare words.

In English, words can appear in various forms due to tense, plurality, conjugation, and other grammatical factors. For example, the verb "run" can have different forms like "running," "ran," and "runs." Lemmatization helps standardize these variations by reducing them to the base form, which in this case is "run."

5.identifying stop words : There are various words in the English language that are used very frequently like 'a', 'and', 'the' etc. These words make a lot of noise while doing statistical analysis. We can take these words out

6.Dependency Parsing : This means finding out the relationship between the words in the sentence and how they are related to each other

7.Finding Noun Phrases : We can group the words that represent the same idea.We can use the output of dependency parsing to combine such words

#### 4.1 Working of the chatbot

Step1 : The user enters some text.

Step2 : The input is analyzed by Natural Language Tool Kit(Natural Language Processing) which helps in assessing the intents and entities of the text entered by the user and create response based on the contextual analysis of the text.

Step 3 :Now it's time to really get into the nitty-gritty of how AI chat bots work. There are five major steps involved — tokenizing, normalizing, recognizing entities, dependency parsing, and generation — for the chatbot to read, interpret, understand, and formulate and send a response. Let's take a closer look.

- Tokenizing: The chatbot starts by chopping up text into pieces (also called 'tokens') and removing punctuation
- Normalizing: Next, the bot removes details that aren't relevant and converts words to their "normal" version, for example by making everything lowercase

- **Recognizing Entities:** Now that the words are all normalized, the chatbot seeks to identify which type of thing is being referred to. For example, it would identify North America as a location, 67% as a percentage, and Google as an organization
- **Dependency Parsing:** For the next step, the bot identifies the role each word plays in the sentence, such as noun, verb, adjective, or object
- **Generation:** Finally, the chatbot generates a number of responses using the information determined in all the other steps and selects the most appropriate response to send to the user.

Step 4 : If the Step 3 is accurately executed by the bot then it displays a correct output randomly from a list of responses

TensorFlow : we use this library to train the model using the datasets.

Json : json stands for java script object notation. All the data which is used to train the bot is stored in the form of dictionary with some pretrained responses.

Tkinter : we used tkinter library to create a proper user interface for the users to interact with the chatbot.