

# Institute of Engineering & Technology



GLA  
UNIVERSITY  
MATHURA  
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# **MINI PROJECT REPORT**

**On**

**College Counselling Chat bot using IBM's Watson API**

**Submitted by**

HARSH KUMAR SINGH(171500121)  
KAUSTUBH SRIVASTAVA(171500159)  
ASHWANI SINGHAL(171500066)  
PUNIT RAMANI(171500243)

Department of Computer Engineering & Applications  
**Institute of Engineering & Technology**



**GLA University**  
**Mathura- 281406, INDIA**  
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**Department of computer Engineering and Applications**

**GLA University, Mathura**

**17 km. Stone NH#2, Mathura-Delhi Road, P.O. – Chaumuha,**

**Mathura – 281406**

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## **Declaration**

I hereby declare that the work which is being presented in the Mini Project” **AI CHAT BOT FOR COLLEGE CONCELLING**”, in partial fulfillment of the requirements for Summer Training viva voce, is an authentic record of my own work carried under the supervision of Vivek Kumar, GLA University, Mathura.

Ashwani Singhal

Signature:

Kaustubh Srivastava

Signature:

Harsh Kumar Singh

Signature:

Punit Ramani

Signature:

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## **ABSTRACT**

After 12th students get confused on choosing the best college according to their various competition exams marks. They have to search on various sites to find the best college. Because of such large number of sites and different ranking on them they get confused and not able to decide the right college.

Our ChatBot is specifically build for Engineering aspirants. They can search ranking on different colleges at a single place. Also they can get the information regarding the top branch w.r.t every college. It reply with the precise information according to each query with a link attached with it. This prevents students from getting confused and give them precise information.

We have build our ChatBot on IBM Cloud and have integrated with facebook messenger so that it also can be assessed by facebook messenger. It can also be assessed by anyone using the link we have generated with our project and with the help of that link, it can is easily assessable on mobile phones, laptops and any other devices.

## **ACKNOWLEDGMENT**

It gives us a great sense of pleasure to present the report of the B. Tech Mini Project undertaken during B. Tech. Third Year. This project in itself is an acknowledgement to the inspiration, drive and technical assistance contributed to it by many individuals. This project would never have seen the light of the day without the help and guidance that we have received.

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We also do not like to miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and cooperation during the development of our project. Last but not the least, we acknowledge our friends for their contribution in the completion of the project.

Ashwani Singhal

Kaustubh Srivastava

Harsh Kumar Singh

Punit Ramani

# **INTRODUCTION**

## **About the Project:**

This project aims at developing a chat bot that can help students in choosing the right stream and course for their under graduation. The project is being developed for the school passed out students who face a lot of problems while deciding which course and branch they should opt-in college/university. The chat bot will work as an android app with a proper user interface. IBM's Watson is a powerful AI API that can be used to develop such bots. The chat bot uses IBM's Watson API as its backbone, which will provide the AI strength to the bot. A user can give his/her area of interest or future goals along with educational choices and the bot will provide the possible courses along with the college which he can opt for. It will also help the user with the scope and demand of the suggested course. The user can provide his choices and options in the form of text or voice, which will then be converted into text by the backend of the app. This text query will be sent to Watson for further processing. Watson will analyze the user's query and will return the proper output using AI. This result will be displayed to the user in the form of voice and text depending on the mode user prefers. In this way, the chat bot will work as a counsellor for the students and will be beneficial to them.

## **Motivation:**

Once after passing out school most of the students are confused in choosing the right stream and course for themselves. This choice is based on various factors such as area of interests, marks, and future choices. For example most of the students are confused whether to go with CSE or ECE branch of engineering. Many of the school passed out students do not have a proper idea about possible streams and available courses in them. There are several firms which claim to provide a proper guidance to such students. A chat bot that can recommend possible streams, courses, colleges and other information to a student can be of great help to him in his choice making.

**Objective:**

Our objective is to develop a platform where B.tech aspirants can get the solution of their career regarding problems.

As we already know after higher secondary, Student find a serious problem of finding colleges of their choice and according to their interest. For this they have to do a lot of surfing and research on different websites and also have to consult number of people regarding this.

So, we are providing a chatting platform where they can easily find a college of their interest and details about it to start their career with a boom by just chatting with an AI chat bot.

**Future Prospects:**

The chat bot can be integrated with a website of similar goals and therefore can help Students in a much more enhanced way.



## **WHAT IS A CHAT BOT ?**

A chat bot is a program that communicates with you.

It is a layer on top of, or a gateway to, a service. Sometimes it is powered by machine learning (the chat bot gets smarter the more you interact with it). Or, more commonly, it is driven using intelligent rules (i.e. if the person says this, respond with that).

The services a chat bot can deliver are diverse. Important life-saving health messages, to check the weather forecast or to purchase a new pair of shoes, and anything else in between.

The term chat bot is synonymous with text conversation but is growing quickly through voice communication... “Alexa, what time is it?” ( other voice-chat bot are available!)

The chat bot can talk to you through different channels; such as Facebook Messenger, Siri, WeChat, Telegram, SMS, Slack, Skype and many others.

Consumers spend lots of time using messaging applications (more than they spend on social media). Therefore, messaging applications are currently the most popular way companies deliver chat bot experiences to consumers.

Chat bot, or conversational interfaces as they are also known, present a new way for individuals to interact with computer systems. Traditionally, to get a question answered by a software program involved using a search engine, or filling out a form. A chat bot allows a user to simply ask questions in the same manner that they would address a human. The most well known chat bot currently are voice chat bot: Alexa and Siri. However, chat bot are currently being adopted at a high rate on computer chat platforms.

The technology at the core of the rise of the chat bot is natural language processing (“NLP”). Recent advances in machine learning have greatly improved the accuracy and effectiveness of natural language processing, making chat bot a viable option for many organizations. This improvement in NLP is firing a great deal of additional research which should lead to continued improvement in the effectiveness of chat bot in the years to come.

A simple chat bot can be created by loading an FAQ (frequently asked questions) into chat bot software. The functionality of the chat bot can be improved by integrating it into the organization's enterprise software, allowing more personal questions to be answered, like "What is my balance?", or "What is the status of my order?".

Most commercial chat bot are dependent on platforms created by the technology giants for their natural language processing. These include Amazon Lex, Microsoft Cognitive Services, Google Cloud Natural Language API, Facebook DeepText, and IBM Watson. Platforms where chat bot are deployed include Facebook Messenger, Skype, and Slack, among many others.

# **SOFTWARE REQUIREMENT ANALYSIS**

## **PROBLEM STATEMENT:**

To design a chat bot which can help the user to get information about colleges, ranking, location of college, and branches of engineering.

## **IBM Watson:**

Watson was created as a question answering (QA) computing system that IBM built to apply advanced natural language processing, information retrieval, knowledge representation, automated reasoning, and machine learning technologies to the field of open domain question answering.

The key difference between QA technology and document search is that document search takes a keyword query and returns a list of documents, ranked in order of relevance to the query (often based on popularity and page ranking), while QA technology takes a question expressed in natural language, seeks to understand it in much greater detail, and returns a precise answer to the question.

When created, IBM stated that, "more than 100 different techniques are used to analyze natural language, identify sources, find and generate hypotheses, find and score evidence, and merge and rank hypotheses."

In recent years, the Watson capabilities have been extended and the way in which Watson works has been changed to take advantage of new deployment models (Watson on IBM Cloud) and evolved machine learning capabilities and optimised hardware available to developers and researchers. It is no longer purely a question answering (QA) computing system designed from Q&A pairs but can now 'see', 'hear', 'read', 'talk', 'taste', 'interpret', 'learn' and 'recommend'.

Powered by the latest innovations in machine learning, Watson is the open, multi-cloud platform that lets you automate the AI lifecycle.

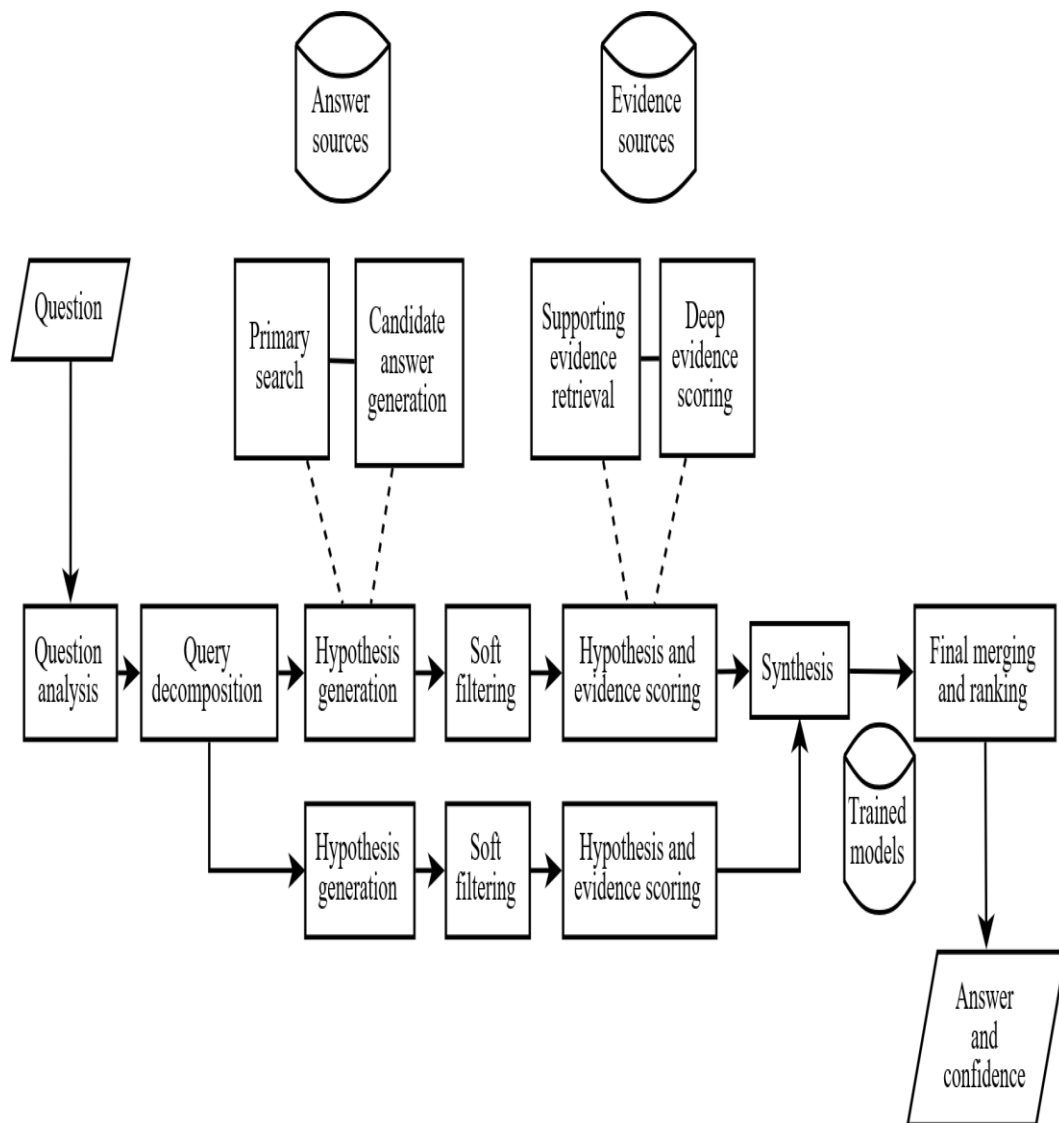
Watson Assistant is IBM's AI product that lets you build, train, and deploy conversational interactions into any application, device, or channel.

Most chat bots try to mimic human interactions, which can frustrate users when a misunderstanding arises. Watson Assistant is more. It knows when to search for an

answer from a knowledge base, when to ask for clarity and when to direct users to a human. Watson Assistant can be deployed in any cloud or on-premises environment – meaning smarter AI is finally available wherever you need it.

**Software:**

Watson uses IBM's DeepQA software and the Apache UIMA (Unstructured Information Management Architecture) framework implementation. The system was written in various languages, including Java, C++, and Prolog, and runs on the SUSE Linux Enterprise Server 11 operating system using the Apache Hadoop framework to provide distributed computing.



## THE ARCHITECTURE OF IBM QADeep

## MODULES AND FUNCTIONALITIES:

### Skills:

A skill is a container for the artificial intelligence that enables an assistant to help your customers.

An assistant directs requests down the optimal path for solving a customer problem. Add skills so your assistant can provide a direct answer to a common question or reference more generalized search results for something more complex.

### Skill types:

You can add the following type of skill to your assistant:

- **Dialog skill:** Understands typical questions or requests from users and answers or fulfills them by following a dialog that is scripted by you.
- **Search skill:** Answers a user's question by searching for relevant information from an external data source, extracting the passage, and returning it as the assistant's response.

### Dialog skill:

A dialog skill contains the training data and logic that enables an assistant to help your customers. It contains the following types of artifacts:

**Intents:** An intent represents the purpose of a user's input, such as a question about business locations or a bill payment. You define an intent for each type of user request you want your application to support. The name of an intent is always prefixed with the # character. To train the dialog skill to recognize your intents, you supply lots of examples of user input and indicate which intents they map to.

Intents (37)	Description	Modified	Examples
<a href="#">#Aeronaut</a>	If user is interested in aeronautical engineering	2 days ago	3
<a href="#">#amity</a>	amity university	8 hours ago	3
<a href="#">#CE</a>	If the branch is CE	2 days ago	5
<a href="#">#Chemical_Engineering</a>	If chemical engineering is the branch	2 days ago	4
<a href="#">#computer_science</a>	If area of interest is computer science	a day ago	11
<a href="#">#cs_vs_it</a>	cs vs it	4 hours ago	4
<a href="#">#Ece</a>	If area of interest is electronics and communication	2 days ago	7
<a href="#">#EE</a>	IF the area of interest is electrical	2 days ago	5
<a href="#">#eevseee</a>	what's diff bw ee and eee	3 hours ago	3
<a href="#">#exams</a>	to get the competition	a day ago	6
<a href="#">#gla</a>	gla university	8 hours ago	5
<a href="#">#goodbyes</a>		5 days ago	13
<a href="#">#greetings</a>		5 days ago	10

A content catalog is provided that contains prebuilt common intents you can add to your application rather than building your own. For example, most applications require a greeting intent that starts a dialog with the user. You can add the General content catalog to add an intent that greets the user and does other useful things, like end the conversation.

**Dialog:** A dialog is a branching conversation flow that defines how your application responds when it recognizes the defined intents and entities. You use the dialog editor to create conversations with users, providing responses based on the intents and entities that you recognize in their input.

To enable your dialog skill to handle more nuanced questions, define entities and reference them from your dialog.

**Entities:** An entity represents a term or object that is relevant to your intents and that provides a specific context for an intent. For example, an entity might represent a city

where the user wants to find a business location, or the amount of a bill payment. The name of an entity is always prefixed with the @ character.

You can train the skill to recognize your entities by providing entity term values and synonyms, entity patterns, or by identifying the context in which an entity is typically used in a sentence. To fine tune your dialog, go back and add nodes that check for entity mentions in user input in addition to intents.

As you add information, the skill uses this unique data to build a machine learning model that can recognize these and similar user inputs. Each time you add or change the training data, the training process is triggered to ensure that the underlying model stays up-to-date as your customer needs and the topics they want to discuss change.



Education Query Chatbot

Intents

Entities

My entities

System entities

Dialog

Options

Analytics

Versions

Content Catalog

Create entity

Entity (8) ▲

Values

Modified ▲

@Branch

Civil Engineering, Chemical Engineering, Mechanical Engineering, Electronics and communication engineer...

a day ago

@competitive\_exams

amu entrance test, viteee, jee mains, Wbjee, upsee, jee advance, state tests

5 days ago

@IIT\_institute

Indian Institute of Information Technology Una, Indian Institute of Information Technology Tiruchirappalli,...

5 days ago

@IIts

IIT Patna, IIT Guwahati, IIT Hyderabad, IIT Indore, IIT Jodhpur, IIT Kanpur, IIT Kharagpur, IIT Mandi, IIT ...

5 days ago

@location

Thoothukudi, Pune, Mumbai, Nagpur, Nashik, Aurangabad, Kolhapur, Solapur, Amravati, Ahmednagar, Jalga...

5 days ago

@NIT\_college

National Institute of Technology , Calicut, National Institute of Technology , Allahabad, National Institute o...

5 days ago

@Private\_college

Lovely Professional Institute of technology, Sharda University, Galgotia Institute of technology, Banasthali ...

5 days ago

@Ranking\_of\_college

top college

2 days ago

Save new version

Education Query Chatbot		
Intents	These are common entities created by IBM that could be used across any use case. They are ready to use as soon as you add them. *System entities cannot be edited.	
Entities	System entities beta provides improved detection of dates, times, and numbers. <a href="#">Update them by navigating to the system entities options tab</a>	
My entities		
System entities	Name (7) ▲	Description
Dialog	> @sys-number	Extracts numbers mentioned from user examples as digits or written as numbers. (21)
Options	> @sys-percentage	Extracts amounts from user examples including the number and the % sign. (15%)
Analytics	> @sys-currency	Extracts currency values from user examples including the amount and the unit. (20 cents)
Versions	> @sys-date	Extracts date mentions (Friday)
Content Catalog	> @sys-time	Extracts time mentions (at 10)
	> @sys-location <sup>BETA</sup>	The @sys-location system entity extracts place names (country, state/province, city, town, etc.) from the user's input. (Boston)
	> @sys-person <sup>BETA</sup>	The @sys-person system entity extracts names from the user's input. (Anna)

## Search skill:

When Watson Assistant doesn't have an explicit solution to a problem, it routes the user question to a search skill to find an answer from across your disparate sources of self-service content. The search skill interacts with the IBM Watson™ Discovery service to extract this information from a configured data collection.

If you already use the Discovery service, you can mine your existing data collections for source material that you can share with customers to address their questions.

However, you do not need to have a Discovery service instance. If you choose to create a search skill, a free instance of Discovery is provisioned for you. You can then create a collection from a data source and configure your search skill to search this collection to find answers to customer queries.

## **SOFTWARE DESIGN**


### **Data Flow Diagram:**


In the below images the flow of data have been described in the sequence of the images attached to it.

The program try to match it's the content in which it has to reply by checking the every node of the dialogs.

The flow is like:

Welcome → ChitChat → Few Colleges → Location Information → Interests and Branches → Branch from Interest → Top College By Branch → Ranking of the college → Answers to Questions → Exams → Different Exams → Jee Mains And Advance Cutoff → Colleges By Name → Anything Else.

 Education Query Chatbot





- Intents
- Entities
- Dialog**
- Options
- Analytics
- Versions
- Content Catalog

**Add node**

Add child node

Add folder



- Welcome
  - welcome
  - 1 Responses / 0 Context Set / Does not return
-  ChitChat
  - 4 Dialog nodes / No digressions
- Greetings
  - #greetings
  - 1 Responses / 0 Context Set / Return allowed
- GoodByes
  - #goodbyes

Education Query Chatbot

Intents

Entities

**Dialog**

Options

Analytics

Versions

Content Catalog

ChitChat

4 Dialog nodes / No digressions

Greetings

#greetings

1 Responses / 0 Context Set / Return allowed

GoodByes

#goodbyes

1 Responses / 0 Context Set / Return allowed

ThankYou

#thank\_you

1 Responses / 0 Context Set / Return allowed

Starting\_chat

#Starting\_view

1 Responses / 0 Context Set / Return allowed

Education Query Chatbot

- Intents
- Entities
- Dialog**
- Options
- Analytics
- Versions
- Content Catalog

#UPSEEE

1 Responses / 0 Context Set / Return allowed

VITjee

#vitjee

1 Responses / 0 Context Set / Return allowed

jee mains and advanced cutoff

2 Dialog nodes / Does not return

jee mains cutoff

#jee\_m\_cutoff

1 Responses / 0 Context Set / Return allowed

JEE advanced Cutoff

#jee\_advanced\_cutoff

1 Responses / 0 Context Set / Return allowed

Education Query Chatbot

- Intents
- Entities
- Dialog**
- Options
- Analytics
- Versions
- Content Catalog

colleges by name

4 Dialog nodes / Does not return

college\_list

@Private\_college

1 Responses / 0 Context Set / Return allowed

Collect Name

@IIIT\_institute

1 Responses / 0 Context Set / Return allowed

IITs

@IIts

1 Responses / 0 Context Set / Return allowed

NIt

@NIT\_college

Education Query Chatbot

Intents

Entities

**Dialog**

Options

Analytics

Versions

Content Catalog

Few colleges

4 Dialog nodes / Does not return

gla

#gla

1 Responses / 0 Context Set / Return allowed

iit kharagpur

#iit\_kharagpur

1 Responses / 0 Context Set / Return allowed

Iit kanpur

#iitkanpur

1 Responses / 0 Context Set / Return allowed

Amity University

#amityu

Education Query Chatbot

Intents

Entities

**Dialog**

Options

Analytics

Versions

Content Catalog

Location Information

@location || #location\_info

2 Responses / 0 Context Set / Does not return

interests and branch

#interest

1 Responses / 0 Context Set / Does not return

Branch from Interest

#Aeronaut || #CE || #Chemical\_Engineering || #computer\_science |...

7 Responses / 0 Context Set / Does not return

top colleges by branch

7 Dialog nodes / Does not return

Ranking\_of\_the\_colleges

@Ranking\_of\_college || #searchcollege

1 Responses / 0 Context Set / Does not return



Education Query Chatbot

Intents

Entities

**Dialog**

Options

Analytics

Versions

Content Catalog

top colleges by branch

7 Dialog nodes / Does not return

top chemical

#top\_chemical

1 Responses / 0 Context Set / Return allowed

#top\_civil

#top\_civil

1 Responses / 0 Context Set / Return allowed

top cse

#top\_cse

1 Responses / 0 Context Set / Return allowed

top Aeronautical

#top\_aeronautical

1 Responses / 0 Context Set / Return allowed

Education Query Chatbot

Intents

Entities

**Dialog**

Options

Analytics

Versions

Content Catalog

top ece

#top\_ece

1 Responses / 0 Context Set / Return allowed

top ee

#top\_ee

1 Responses / 0 Context Set / Return allowed

top mechanical

#top\_mechanical

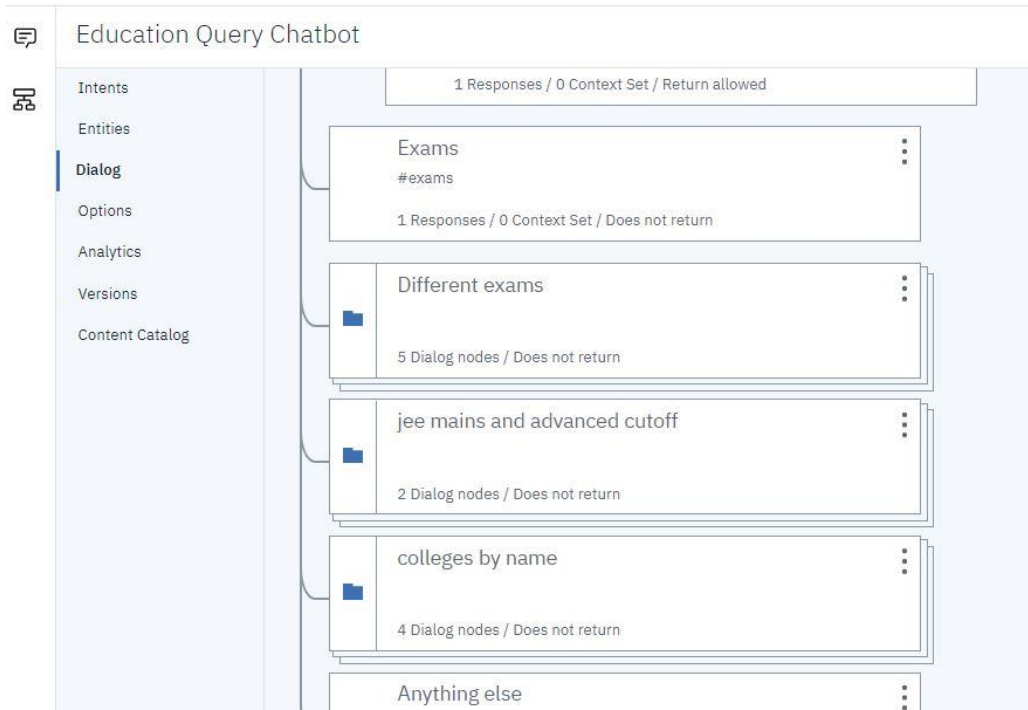
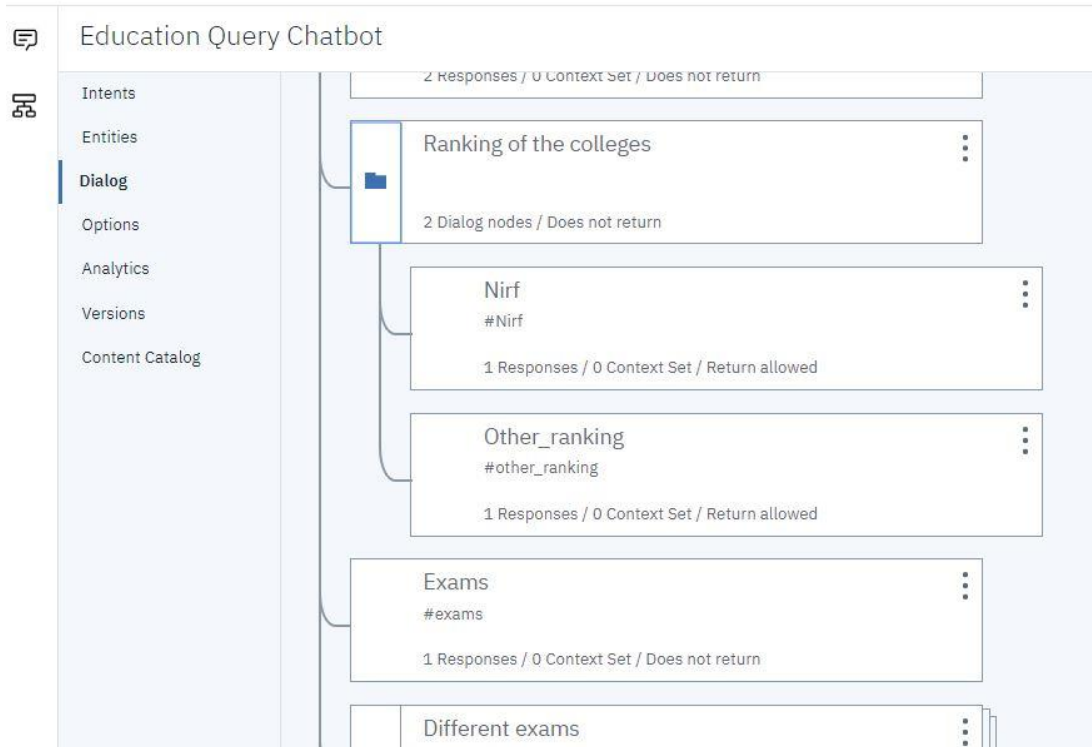
1 Responses / 0 Context Set / Return allowed

Ranking\_of\_the\_colleges

@Ranking\_of\_college || #searchcollege

1 Responses / 0 Context Set / Does not return

answers to questions



Education Query Chatbot

- Intents
- Entities
- Dialog**
- Options
- Analytics
- Versions
- Content Catalog

Different exams

5 Dialog nodes / Does not return

- jeemains

#jee\_mains

1 Responses / 0 Context Set / Return allowed
- jee advanced

#jee\_Advanced

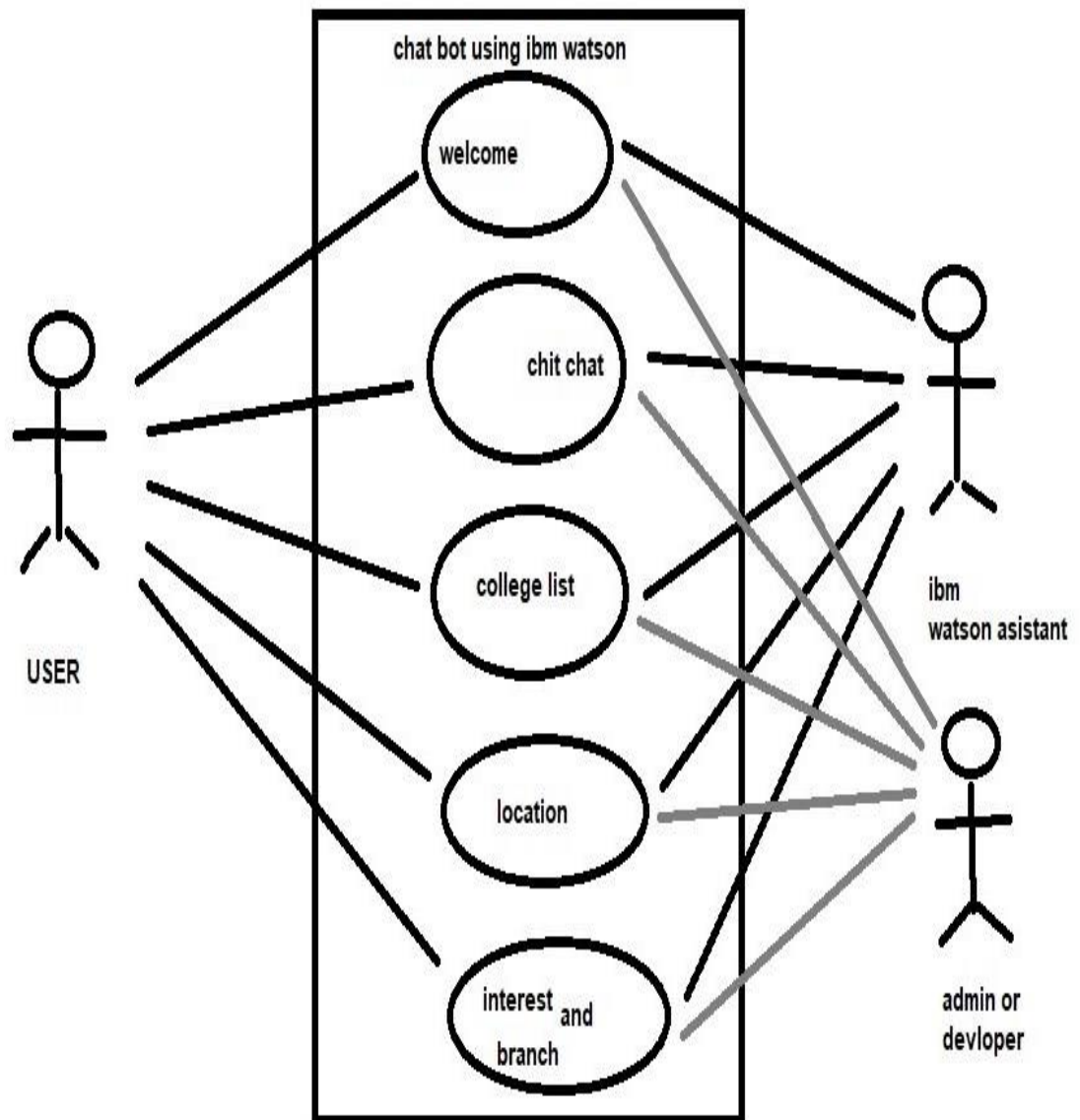
1 Responses / 0 Context Set / Return allowed
- WbJEE

#wbjee

1 Responses / 0 Context Set / Return allowed
- UPSEE

#UPSEEE

Used Case Diagram:



# **TESTING**

Testing is a process of executing a program with the aim of finding error. To make our software perform well it should be error free. If testing is done successfully it will remove all the errors from the software.

## **Principles of Testing:-**

- (i) All the test should meet the customer requirements
- (ii) To make our software testing should be performed by third party
- (iii) Exhaustive testing is not possible. As we need the optimal amount of testing based on the risk assessment of the application.
- (iv) All the test to be conducted should be planned before implementing it
- (v) It follows pareto rule(80/20 rule) which states that 80% of errors comes from 20% of program components.
- (vi) Start testing with small parts and extend it to large parts.

## **White Box Testing**

It is defined as the testing of a software solution's internal structure, design, and coding. In this type of testing, the code is visible to the tester. It focuses primarily on verifying the flow of inputs and outputs through the application, improving design and usability, strengthening security.

## **Black Box Testing**

Black box testing is a type of software testing in which the functionality of the software is not known. The testing is done without the internal knowledge of the products.

### Assistant preview

Hi, this is PadhoLikho and I'm a chatbot for engineering college counseling. How may I help you?



Type something...



### Assistant preview



hello

Hi there!

namaste

Hey, looks like someone is enthusiastic,  
be like that!

Type something...



### Assistant preview

Hey, looks like someone is enthusiastic,  
be like that!

gla



GLA University Mathura

[gla.ac.in](http://gla.ac.in)

Type something...



### Assistant preview

[illegible]

## NIRF Ranking

### Top 20 NIRF colleges

Type something...





## Assistant preview

NIRF-ENGGRF-345	Indian Institute Of Technology Hyderabad	<a href="#">More Details</a>	Hyderabad	Engineering	4722
NIRF-ENGGRF-228	Indian Institute Of Technology Gandhinagar	<a href="#">More Details</a>	Amravati	Digital	3521
NIRF-ENGGRF-340	Indian Institute Of Technology Raipur/Rajnagar	<a href="#">More Details</a>	Rajnagar	Purple	3181
NIRF-ENGGRF-344	Indian Institute Of Technology Patna	<a href="#">More Details</a>	Patna	Blue	2488
NIRF-ENGGRF-289	Indian Institute Of Technology North Guwahati	<a href="#">More Details</a>	Guwahati	Assam	3182
NIRF-ENGGRF-270	National Institute Of Technology Trichy/Trapal	<a href="#">More Details</a>	Trichy/Trapal	Spice Tech	3441
NIRF-ENGGRF-266	Vellore Institute Of Technology	<a href="#">More Details</a>	Vellore	Tamil Nadu	3160
NIRF-ENGGRF-413	Indian Institute Of Technology (Banarus Hindu University), Varanasi	<a href="#">More Details</a>	Varanasi	Uttar Pradesh	3425
NIRF-ENGGRF-373	Savitribai Phule National Institute Of Technology	<a href="#">More Details</a>	Surat	Digital	3313
NIRF-ENGGRF-348	Indian Institute Of Technology Indore	<a href="#">More Details</a>	Indore	Madhya Pradesh	3201
NIRF-ENGGRF-248/ENGRF-40	Birla Institute Of Technology	<a href="#">More Details</a>	Rourkela	Jharkhand	3181
NIRF-ENGGRF-275	Vivekananda National Institute Of Technology (Nagar of Government), Nagpur	<a href="#">More Details</a>	Nagpur	Madhya Pradesh	3125
NIRF-ENGGRF-140	National Institute Of Technology Rourkela/Rourkela	<a href="#">More Details</a>	Rourkela	Odisha	3080
NIRF-ENGGRF-338	Indian Institute Of Technology Mandi	<a href="#">More Details</a>	Mandi	Himachal Pradesh	3031

See all NIRF ranking [https://www.nirf.gov.in/2020/01/20/2020-nirf-ranking/](#)

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## NIRF Ranking Top 20 NIRF colleges

Link to top 100 engineering colleges by NIRF: [nirfindia.org/engg](https://nirfindia.org/engg)

Type something...



## **IMPLEMENTATION AND USER INTERFACE**

### **Facebook Developer**

The Facebook Platform is the set of services, tools, and products provided by the social networking service Facebook for third-party developers to create their own applications and services that access data in Facebook.

IBM allows free of cost integration of the Watson chatbot to Facebook messenger. At first the API is linked with facebook messenger account of an admin of a page. The API is tested before and if works properly, the chatbot goes live but before that Terms of Usage and Privacy Policy are needed.

### **Graph API**

The Graph API is the core of Facebook Platform, enabling developers to read from and write data into Facebook. The Graph API presents a simple, consistent view of the Facebook social graph, uniformly representing objects in the graph (e.g., people, photos, events, and pages) and the connections between them (e.g., friend relationships, shared content, and photo tags).

### **Authentication**

Facebook authentication enables developers' applications to interact with the Graph API on behalf of Facebook users, and it provides a single-sign on mechanism across web, mobile, and desktop apps.

### **Social plugins**

Social plugins – including the Like Button, Recommendations, and Activity Feed – enable developers to provide social experiences to their users with just a few lines of

HTML. All social plugins are extensions of Facebook and are designed so that no user data is shared with the sites on which they appear. On the other hand, the social plugins let Facebook track its users' browsing habits through any sites that feature the plugins. And the data collected from the browsing habits of the users helps marketers and advertisers on Facebook to target their audience.

In this section we have discussed about the different User Screens on which we have worked:

### Front end:

West Bengal Joint Entrance Exam is a state-government exam conducted by WBJEE Board for admission to many private and governmental engineering institutions in West Bengal.

Cutoff's for WBJEE in Jadavpur University:

Branch	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025	1024	1023	1022	1021	102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Interest

14:16

Your area of interest should be the key factor in deciding your college.

Please specify your area of interest.

software

Computer Science is a major leading branch in the engineering sector. Preferred by many for various reasons like placement, job security, programming, and software as interests

Placement is a key factor in choosing CSE. Companies like Amazon  
Microsoft  
Goldaman Sachs  
Directi etc. pay a good annual package to the freshers.

Want to have a look at the best CSE college:

YesNo

Tum Bhi Engineering

Namaste

Hi there!

looking for colleges

Now, that sounds exciting. Indeed school was fun, but college is always a much more happening and exciting place. 😊  
I hope you get the best college and a wonderful life ahead.

I want to go back and enjoy college moments again. 😊😊

I will definitely help you find the best college for you.

Your RankInterestLocation

GIF

Type a message...

36

The methodology draws from the overall recommendations broad understanding arrived at by a Core Committee set up by MHRD, to identify the broad parameters for ranking various universities and institutions. The parameters broadly cover "Teaching, Learning and Resources," "Research and Professional Practices," "Graduation Outcomes," "Outreach and Inclusivity," and "Perception".

Rank	Institution Name	NIRF Score	Rank
1	Indian Institute of Technology (IIT) Bombay	98.01	101
2	Indian Institute of Technology (IIT) Delhi	97.50	102
3	Indian Institute of Technology (IIT) Madras	97.00	103
4	Indian Institute of Technology (IIT) Kharagpur	96.50	104
5	Indian Institute of Technology (IIT) Roorkee	96.00	105
6	Indian Institute of Technology (IIT) Guwahati	95.50	106
7	Indian Institute of Technology (IIT) Patna	95.00	107
8	Indian Institute of Technology (IIT) Varanasi	94.50	108
9	Indian Institute of Technology (IIT) Jodhpur	94.00	109
10	Indian Institute of Technology (IIT) Gandhinagar	93.50	110

Link to top 100 engineering colleges by NIRF:  
<https://www.nirfindia.org/engg>

### ranking of colleges

Colleges are ranked on various parameters such as infrastructure, facilities, placement, research areas, etc. A top-ranked college always has some upper hand over a college with fewer ratings. 🏠

There's many organization's that rank colleges. The National Institutional Ranking Framework (NIRF) has been accepted by the MHRD

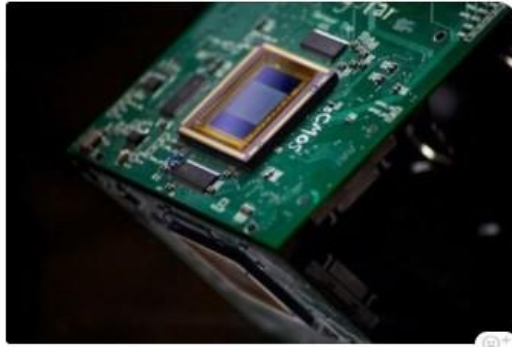
Yes



The methodology draws from the overall recommendations broad

best ec colleges near me

Here is the link for the best ECE colleges:



<https://www.shiksha.com/b-tech/ranking/top-electronics-communication-engineering-colleges-in-india/45-2-0-0-0>

## Back End:

facebook for developers Docs Tools Support My Apps Search developer documentation

BeingEngineer APP ID: 545822076210951 OFF Status: In Development View Analytics Help

Create ads to help more people discover your experience in Messenger. Learn more

Get started


Check out some resources that may help you in development: Quick Start (build a Messenger app in 10 minutes) and Complete Documentation. Also join our Messenger Platform Developers Community on Facebook to get latest news and learn more!

Access Tokens Create New Page

Generate a Page access token to start using the platform APIs. You will be able to generate an access token for a Page if:

1. You are one of the Page admins, and
2. The app has been granted the Page's permission to manage and access Page conversations in Messenger.

Note: If your app is in dev mode, you can still generate a token but will only be able to access people who manage the app or Page.

Pages ↑	Tokens
 Tum Bhi Engineering 103152101157620	— <a href="#">Generate Token</a>

[Add or Remove Pages](#) ⓘ

<https://developers.facebook.com/support/>

Webhooks
[Learn More](#)

Page ▼

*i*
To ensure on-time updates, use the same API version for every subscribed field on this object.

*!*
Applications will only be able to receive test webhooks sent from the app dashboard while they are in development. No production data, including that of app admins, developers, and testers, will be delivered unless the app is live.


Edit Subscription

Name	Test	Subscribe
affiliation	v5.0 ▼ <button>Test</button>	v5.0 ▼ <button>Subscribe</button>
attire	v5.0 ▼ <button>Test</button>	v5.0 ▼ <button>Subscribe</button>
awards	v5.0 ▼ <button>Test</button>	v5.0 ▼ <button>Subscribe</button>
bio	v5.0 ▼ <button>Test</button>	v5.0 ▼ <button>Subscribe</button>

## PREVIEW OF USER INTERFACE:

Assistant preview

Hi, this is PadhoLikho and I'm a chatbot for engineering college counseling. How may I help you?



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## **APPENDICES**

### **CODE:**

Here, the code related with each dialog has been shown

- WELCOME node

```
{  
  
  "output": {  
  
    "generic": [  
  
      {  
  
        "values": [  
  
          {  
  
            "text": "Hello. My name is PadhoLikho and I'm a chatbot for engineering  
college counseling."  
  
          },  
  
          {  
  
            "text": "Hi, this is PadhoLikho and I'm a chatbot for engineering college  
counseling. How may I help you?"  
  
          },  
  
          {  
  
            "text": "Thanks for reaching by, How can I help! PadhoLikho!"  
  
          }  
  
        ],  
  
        "response_type": "text",  
  
        "selection_policy": "random"
```

```

    },

    {

        "title": "",

        "source": "https://images.theconversation.com/files/206092/original/file-20180213-58339-n9h57g.jpg?ixlib=rb-1.1.0&q=45&auto=format&w=926&fit=clip",

        "description": "",

        "response_type": "image"

    }

]

},

"context": {}

}

• CHIT CHAT

```

```

{

"output": {

"generic": [

{

"values": [

{

"text": "Hey!!"

},

{


```

```

    "text": "Hi there!"

  },

  {

    "text": "Hey, looks like someone is enthusiastic, be like that!"

  },

  {

    "text": "hello!"

  }

],

"response_type": "text",

"selection_policy": "random"

}

]

}

}

```

- TOP COLLEGES BY BRANCH

```

{

  "output": {

    "generic": [

      {

        "values": [

          {

```

```

    "text": "Best Computer Science Engineering Colleges in India:"
  },
  {
    "text": "Top cse colleges of India:"
  },
  {
    "text": "Some of the best computer science engineering colleges:"
  }
],
"response_type": "text",
"selection_policy": "random"
},
{
  "source": "https://uploads.sarvgyan.com/2014/06/cse-image.jpg",
  "response_type": "image"
},
{
  "values": [
    {
      "text": "https://www.shiksha.com/b-tech/ranking/top-computer-science-engineering-colleges-in-india/46-2-0-0-0"
    }
  ]
}

```

```
    "text": "https://collegedunia.com/engineering/computer-science-colleges"
  },
  {
    "text": "https://engineering.careers360.com/colleges/list-of-computer-science-
engineering-colleges-in-india"
  }
],
"response_type": "text",
"selection_policy": "sequential"
}
]
}
}
```