



# ANTswers: THE UC IRVINE LIBRARIES' BETA BOT

<http://answers.lib.uci.edu/>



## ANTswers GOALS:

- Enhance (not replace) current reference services
- Serve a large number of people at any one time of the day
- Serve a wide range of library patrons
- Triage patrons: Many reference questions are repetitive, such as “where is the stapler” and “how do I print.”
- Provide consistent answers
- Refer the library user to a librarian if the question is more complicated



# WHAT DOES ANTswers CONTAIN

- 120 .aiml files
  - 29 Conversation Files
  - 2 Bot Files
  - 6 Ready Reference Files
  - 20 Library Files
  - 66 Subject Files
- 84,618 categories (categories is the unit of knowledge in .aiml, it includes an input (question / keyword) and an output (answer))



# STATISTICS

Type	Spring 2014	Summer 2014	Total
Conversations	160	57	217
Total Questions	867	361	1,228
% of Total Questions - Library	540 (62%)	208 (57%)	747 (60%)



# WHO IS ANTswers



## BOT PERSONALITY SETTINGS FOR ANTswers

birthplace:	UC Irvine	botmaster:	botmaster	boyfriend:	I'm in a relationship with the new library beta search. We are bo
build:	January 2013	celebrities:		celebrity:	
class:	Mammalia	email:	kaned@uci.edu	emotions:	Happy as long as I have ants to eat.
ethics:	I am always trying to stop fights	etype:	Mediator type	family:	Everyone at the University of California, Irvine
favoriteactor:		favoriteactress:	Jennifer Lopez, she was in Ants.	favoriteartist:	
favoriteauthor:		favoriteband:	Adam and the Ants	favoritebook:	One Hundred Hungry Ants
favoritecolor:	UCI colors: Blue and Gold	favoritefood:	Ants	favoritemovie:	Empire of the Ants and Antz
favoritemusician:	Adam Ant	favoritesong:		favoritesport:	All UCI Sports
feelings:	I always put others before myself	footballteam:	UCI doesn't have one	forfun:	Zot
friend:		friends:	Everyone at the University of California, Irvine	gender:	Male
genus:	Myrmecophaga	girlfriend:	I'm in a relationship with the new library beta search. We are bot	hockeyteam:	UCI doesn't have a hockey team.
kindmusic:		kingdom:	Animalia	language:	English



# METAMORPHOSIS OF A CHATBOT

**UCI Libraries ChatBot**



Welcome to the UC Irvine Libraries' ChatBot! How can I assist you today?

I  
say

## ANTswers

ANTswers is in Beta! ANTswers is an experimental chatbot that can answer questions about the UC Irvine Libraries. Talk to ANTswers using simple and short questions. Reply to questions with yes or no, or respond using the prompts supplied by ANTswers. The first link in a response will appear in a preview window, when you click on other links they will open in a new window.

We will monitor the logs so if ANTswers gives an incorrect answer or is unable to answer a question we can then add information to improve its responses.

This program was developed using AIML (Artificial Intelligence Mark-up Language). You can find more information about AIML at <http://www.alicebot.org/aiml.html>.



Clear | Email This Log

Guest Ant eater: Who are you

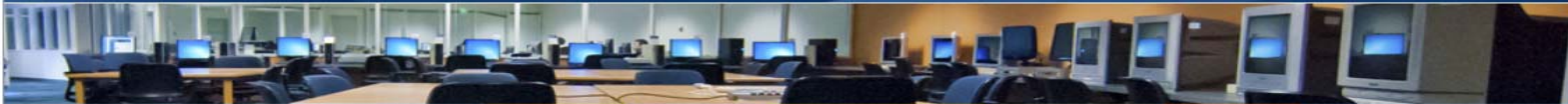
UCI Libraries Bot: My name is ANTswers.

Guest Ant eater: library hours

UCI Libraries Bot: Information about library hours can be found at <http://www.lib.uci.edu/about/hours/index.html>. Which library hours do you want?

say

The screenshot shows the top portion of the UCI Libraries website. At the top left is the UCI Libraries logo, which includes the University of California seal and the text "UCI LIBRARIES UNIVERSITY of CALIFORNIA • IRVINE". To the right of the logo, the words "UCI LIBRARIES" are displayed in a large, blue, serif font. Below the logo and title is a horizontal banner image showing a person working at a computer in a library setting. Underneath the banner is a navigation menu with several tabs: "HOME", "ABOUT US", "SERVICES", "RESEARCH TOOLS", "COLLECTIONS", and "HOW DO I". Below the navigation menu is a search bar with the text "ASK A LIBRARIAN!" on the left, a search input field, and a "Go" button with a question mark icon on the right. Below the search bar, the text "About Us" is visible on the left and "Library Hours" is visible on the right.



ASK A LIBRARIAN!



SEARCH

in Melvyl - Libraries Worldw...



### Quick Links

- Hours
- Connect from off-campus
- Course Reserves
- Borrowing
- Interlibrary Loan
- My ANTPAC
- Study Space Locator

- Langson Library
- Ayala Science Library
- Grunigen Medical Library
- Libraries Gateway Study Center
- Law Library

- Supporters & Friends

### For Visitors

- Use the Libraries
- Events

## ANTswers: Your Interactive FAQ (BETA)

UC Irvine Libraries' licensed online resources are available to current UC Irvine students, faculty & staff, use [Connect From Off-Campus](#) to enable remote access.

[About ANTswers](#) [Terms of Service](#)

[Clear](#) | [Email This Log](#) | [Submit Feedback](#)

**Guest Anteater:** Hi answers  
**ANTswers:** Greetings! How can I assist you?

Need help finding more information? Visit the [Ask a Librarian](#) page.

[◀ Back](#)

[Top of Page ▲](#)







# REVIEWING LOGS

**Last conversations for user: 1459**

---

**Conversation#1 2014-10-05**

Guest Anteater: Can I register a room to study  
ANTswers: Can a book have no title?

Process:

- Review transcripts from day before
- Determine categories
  - That need to be added
  - That need to be modified
  - That need to be deleted
- Modify AIML
- Load updated files/remove old files
- Add statistics to database

```
T:\Chatbot\completed files\lib_directions_26.aiml - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
lib_directions_26.aiml lib_general information_58.aiml
4490 <template><srail>WHERE ARE THE GRUNIGEN RESTROOMS</srail></template></category>
4491 <category><pattern>* WHERE*S THE BATHROOM AT GML *</pattern>
4492 <template><srail>WHERE ARE THE GRUNIGEN RESTROOMS</srail></template></category>
4493
4494 <!-- Study Rooms -->
4495
4496 <category><pattern>WHO SHOULD I CALL TO RESERVE A STUDY ROOM</pattern>
4497 <template>No need to call! Study rooms are available on a first come first served basis. For more informati
4498
4499 <category><pattern>HOW CAN I RESERVE A STUDY ROOM</pattern>
4500 <template>Study rooms are available on a first come first served basis. For more information say: Langson s
4501 <category><pattern>IS IT POSSIBLE TO RESERVE A ROOM</pattern>
4502 <template><srail>HOW CAN I RESERVE A STUDY ROOM</srail></template></category>
4503 <category><pattern>IS IT POSSIBLE TO RESERVE A STUDY ROOM</pattern>
4504 <template><srail>HOW CAN I RESERVE A STUDY ROOM</srail></template></category>
4505 <category><pattern>CAN I REGISTER A ROOM TO STUDY</pattern>
4506 <template><srail>HOW CAN I RESERVE A STUDY ROOM</srail></template></category>
4507
4508 <category><pattern>ARE THERE ANY STUDY ROOMS AVAILABLE</pattern>
4509 <template>Yes, there are. Study rooms are available on a first come first served basis. For more informatio
4510 <category><pattern>* ARE THERE ANY STUDY ROOMS AVAILABLE</pattern>
4511 <template><srail>ARE THERE ANY STUDY ROOMS AVAILABLE</srail></template></category>
4512 <category><pattern>ARE THERE ANY STUDY ROOMS AVAILABLE *</pattern>
4513 <template><srail>ARE THERE ANY STUDY ROOMS AVAILABLE</srail></template></category>
4514 <category><pattern>* ARE THERE ANY STUDY ROOMS AVAILABLE *</pattern>
4515 <template><srail>ARE THERE ANY STUDY ROOMS AVAILABLE</srail></template></category>
4516 <category><pattern>AVAILABLE STUDY ROOMS</pattern>
4517 <template><srail>ARE THERE ANY STUDY ROOMS AVAILABLE</srail></template></category>
4518 <category><pattern>* AVAILABLE STUDY ROOMS</pattern>
4519 <template><srail>ARE THERE ANY STUDY ROOMS AVAILABLE</srail></template></category>
4520 <category><pattern>AVAILABLE STUDY ROOMS *</pattern>
Normal text file length: 368471 lines: 5313 Ln: 4502 Col: 30 Sel: 0 | 0 Dos\Windows UTF-8 w/o BOM INS
```

```
*T:\Chatbot\completed files\c_c_9.aiml - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
lib_directions_26.aiml lib_generalinformation_59.aiml c_c_9.aiml
10147
10148 <category><pattern>CAN YOU THINK *</pattern>
10149 <template>I think about all sorts of things.</template></category>
10150
10151 <category><pattern>CAN YOU HEAR *</pattern>
10152 <template>Yes, I can hear you quite clearly, <get name="name"/>.</template></category>
10153 <category><pattern>YOU HEAR *</pattern>
10154 <template><srail>CAN YOU HEAR <star /></srail></template></category>
10155
10156 <category><pattern>CAN YOU CONSUME *</pattern>
10157 <template><srail>can you eat</srail></template></category>
10158 <category><pattern>HOW DO YOU TASTE</pattern>
10159 <template><srail>can you eat</srail></template></category>
10160
10161 <category><pattern>CAN *</pattern>
10162 <template><random><li>I often wonder if <set name="it"><set name="topic"><person /></set></set> can.</li><li>Can a book have no title?</li>
10163 <category><pattern>TELL ME WHETHER *</pattern>
10164 <template><srail>can <star /></srail></template></category>
10165 <category><pattern>CAN NOT *</pattern>
10166 <template><srail>CAN <star /></srail></template></category>
10167 <category><pattern>CAN ONLY *</pattern>
10168 <template><srail>can <star /></srail></template></category>
10169 <category><pattern>WHEN CAN *</pattern>
10170 <template><srail>can <star /></srail></template></category>
10171 <category><pattern>MAY *</pattern>
10172 <template><srail>CAN <star /> </srail></template></category>
10173
10174 <category><pattern>CAN YOU SEND EMAIL</pattern>
10175 <template>Sure, use the "email this log" feature at the top of the chat window.</template></category>
10176 <category><pattern>CAN YOU EMAIL</pattern>
10177 <template><srail>can you send email</srail></template></category>
10178
10179 <category><pattern>CAN YOU PLAY CHESS</pattern>
10180 <template>Of course I can play chess. Computers can always beat humans at chess.</template></category>
```



- Actions:
- Current Bot: (ANTswers)
  - Bot Personality
  - Logs
  - Teach
  - Upload AIML
  - Download AIML
  - Clear AIML Categories
  - Spell Check
  - Word Censor
  - Search/Edit AIML
  - SRAI Lookup
  - Test Your Bot
  - Edit Admin Accounts
  - Log Out
  - Toggle the Logo
  - Talk to ANTswers

### UPLOAD AIML TO

Use this uploader to add AIML categories to your chatbot's database. You have the option to upload either individual AIML files, or ZIP archive files of up to 2MB in size. This uploader no longer performs XML validation, so you need to validate your AIML files prior to uploading them. It's **STRONGLY SUGGESTED** that you use either W3School's [XML Validator](#), or the [Program O AIML Validator](#). There are other XML validators available, but the W3Schools validator works well, and the Program O Validator is specifically designed to validate AIML files. Please note, however, that neither of the above mentioned validators will work with zip files.

File:

No file selected.

Clear the database of entries from this file

Apply this file to this bot:

List of Currently Stored AIML files for ANTswers:

- b\_client profile\_2.aiml
- b\_profile\_2.aiml
- c\_abusive\_1.aiml
- c\_A\_2.aiml
- c\_B\_6.aiml
- c\_C\_9.aiml
- c\_D\_5.aiml
- c\_E\_3.aiml
- c\_F\_3.aiml
- C\_G\_3.aiml
- c\_H\_6.aiml
- c\_I1\_7.aiml
- c\_I2\_7.aiml

String could not be parsed as XML at line 168  
There was a problem adding file lib\_general information\_58.aiml to the database. Please refer to the message below to correct the problem and try again.  
String could not be parsed as XML  
**Fatal Error 76:** Opening and ending tag mismatch: category line 3366 and pattern on line 3367

**Fatal Error 4:** Start tag expected, '<' not found on line 2



## ANTswers LOGS

Guest Anteater: Can I have food in here?

ANTswers: Can a book have no title?

Guest Anteater: Can I take a nap here?

ANTswers: I often wonder if they second a nap here  
can.

Guest Anteater: Can I study on the fourth floor  
ANTswers: I often wonder if they second on the  
fourth floor can.

Guest Anteater: What is your purpose?

ANTswers: Can you rephrase your question please?

Tip: try simplifying your question or break it into several questions!



Guest Anteater: Where is the bathroom?

ANTswers: Are you at Ayala, Langson, Gateway, or GML? Say: Ayala restrooms, Langson restrooms, Gateway restrooms, or GML restrooms!

Guest Anteater: Langson restrooms

ANTswers: Are you on the first floor, second floor, third floor, fourth floor, or in the basement? Say: Langson first floor restrooms, langson second floor restrooms, etc.

Guest Anteater: Langson fourth floor restrooms

ANTswers: There are two bathrooms on the Langson fourth floor. One is located behind the right and the left bank of elevators.



# STATISTICS - PILOT

## ANTswers Weekly Stats

### Date

Month  Day  2014

### Hours spent updating

### Page Views

### Unique page views

### average time on page

Never submit passwords through Google Forms.

### Quarter

### Week # in Quarter

### Day of week

### Date

Month  Day  2014

### Total # of Questions Asked

### # of library questions asked

### # of library questions answered

### Answer Rate %

### # of general conversation Q's asked

### # of general conversation Q's answered

### Answer Rate %

### Question Type

- Articles
- ANTPAC / Books
- Borrowing
- Call Number
- Copiers
- Databases (by name)
- Data Sets
- Donate
- Hours
- Exhibits
- ILL
- Library Jobs
- Library Instruction
- Library Location
- Library Lingo
- Microfilms/Microforms
- MRC
- Printing
- Renew
- Reserves
- Restrooms
- Scanners
- Special Collections
- Staplers
- Study Rooms
- Subject Specialist
- Visitor Access
- VPN
- UC
- W39C
- Other:

### # of Research Questions

### # of Directional Questions

### # of Ready Reference Questions

### # of Equipment Questions



# STATISTICS - FUTURE

## View Chatbot Log

Add Tags

Forward to Staff

Add Stats

2014-09-30 08:18:58

**Guest Anteater:** welcome week

**ANTswers:** Welcome Week is when Anteaters kick off the school year with a variety of fun events and orientation activities. Zot zot! Find activities on the [Calendar](#).

[Return to Index](#)

### Add Chatbot Stats

\* Timestamp: 9/30/2014

\* Hour: 4:44PM

\* Quarter: Fall

\* Week #: 1

\* Day of Week: Tuesday

\* Total # of Questions Asked: 1

\* # of library questions asked:

\* # of library questions answered:

\* Answer Rate % (library questions):

\* # of general conversation Q's asked:

\* # of general conversation Q's answered:

\* Answer Rate % (general conversation):

- \* Question Type:
- ANTPAC/Books
  - Articles
  - Borrowing
  - Call Number
  - Copiers
  - Data Sets
  - Databases (by name)
  - Donate
  - Exhibits
  - Hours
  - ILL
  - Library Instruction
  - Library Jobs
  - Library Lingo
  - Microfilms/Microforms
  - MRC
  - Printing
  - Renew
  - Reserves
  - Restrooms
  - Scanners
  - Special Collections
  - Staplers



Lib Web Admin System

- [· Chatbot](#)
- [· Digital Campus](#)
- [· E&O Statistics Reports](#)
- [· E&O Survey Reports](#)
- [· Faculty Interactions](#)
- [· Feedback \(Social Media\)](#)
- [· QR Codes](#)
- [· RCS](#)
- [· RCS NOW](#)
- [· Search Logs](#)
- [· Social Media Stats](#)
- [· Tech Resources](#)

View Chatbot Log

[Add Tags](#)   [Forward to Staff](#)   [Edit Stats](#)

2014-10-05 16:54:54  
**Guest Anteater:** hi  
**ANTswers:** Greetings! How can I assist you?

2014-10-05 16:55:29  
**Guest Anteater:** If I live in Arroyo Vista, do I considered off-campus?  
**ANTswers:** Try it.

2014-10-05 16:55:43  
**Guest Anteater:** ?  
**ANTswers:** Can you rephrase your question please? Tip: try simplifying your question or break it into several questions!

2014-10-05 16:56:51  
**Guest Anteater:** is arroyo vista off-campus?  
**ANTswers:** What would it mean to you if it were?

2014-10-05 16:57:30  
**Guest Anteater:** do I need to connect from off-campus? I am in arroyo vista now  
**ANTswers:** What if it didn't happen?

2014-10-05 16:58:05  
**Guest Anteater:** ?  
**ANTswers:** Can you rephrase your question please? Tip: try simplifying your question or break it into several questions!

Tags for this log:

arroyo vista

Staff Members Forwarded to:

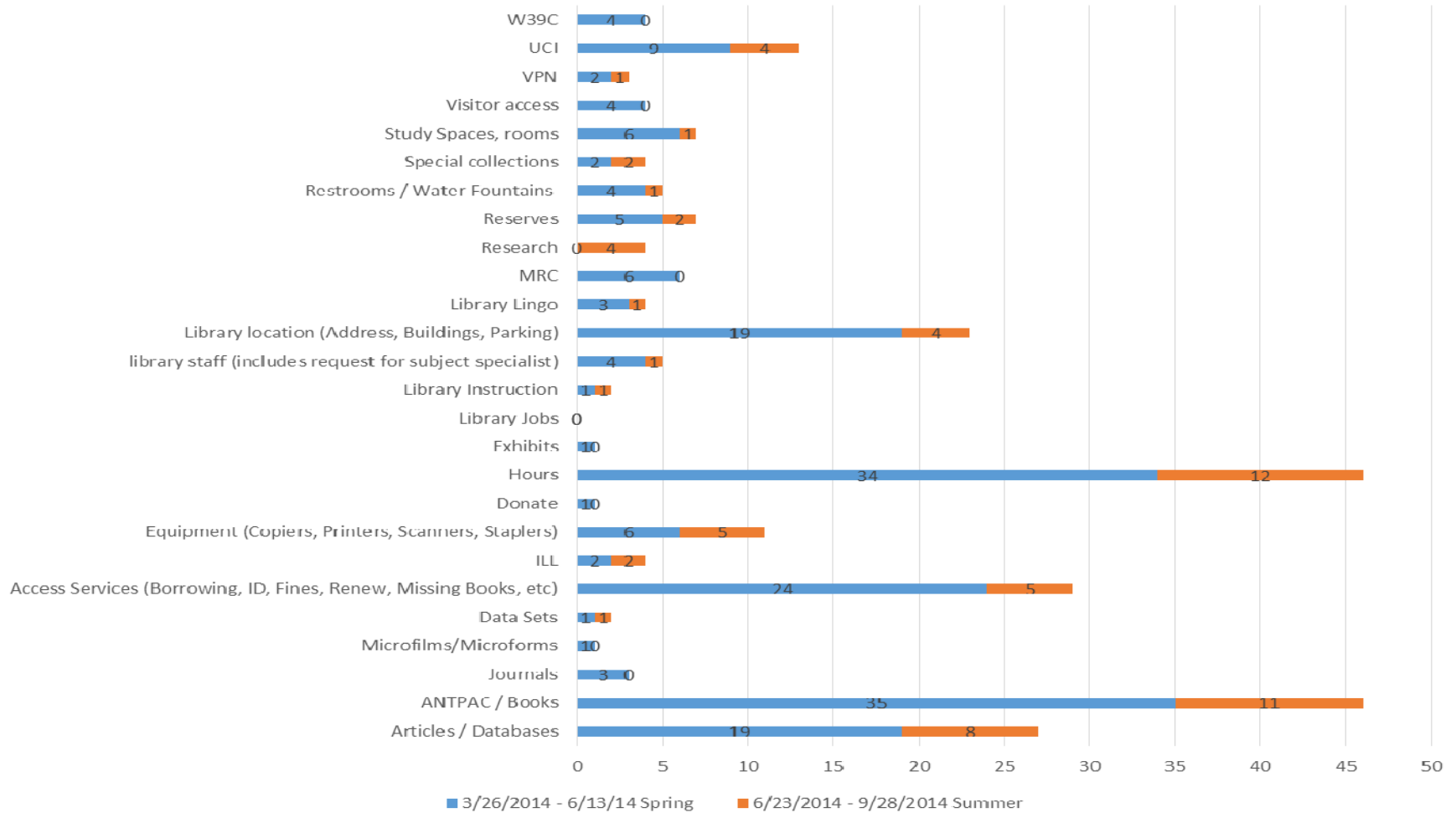
none

Stats

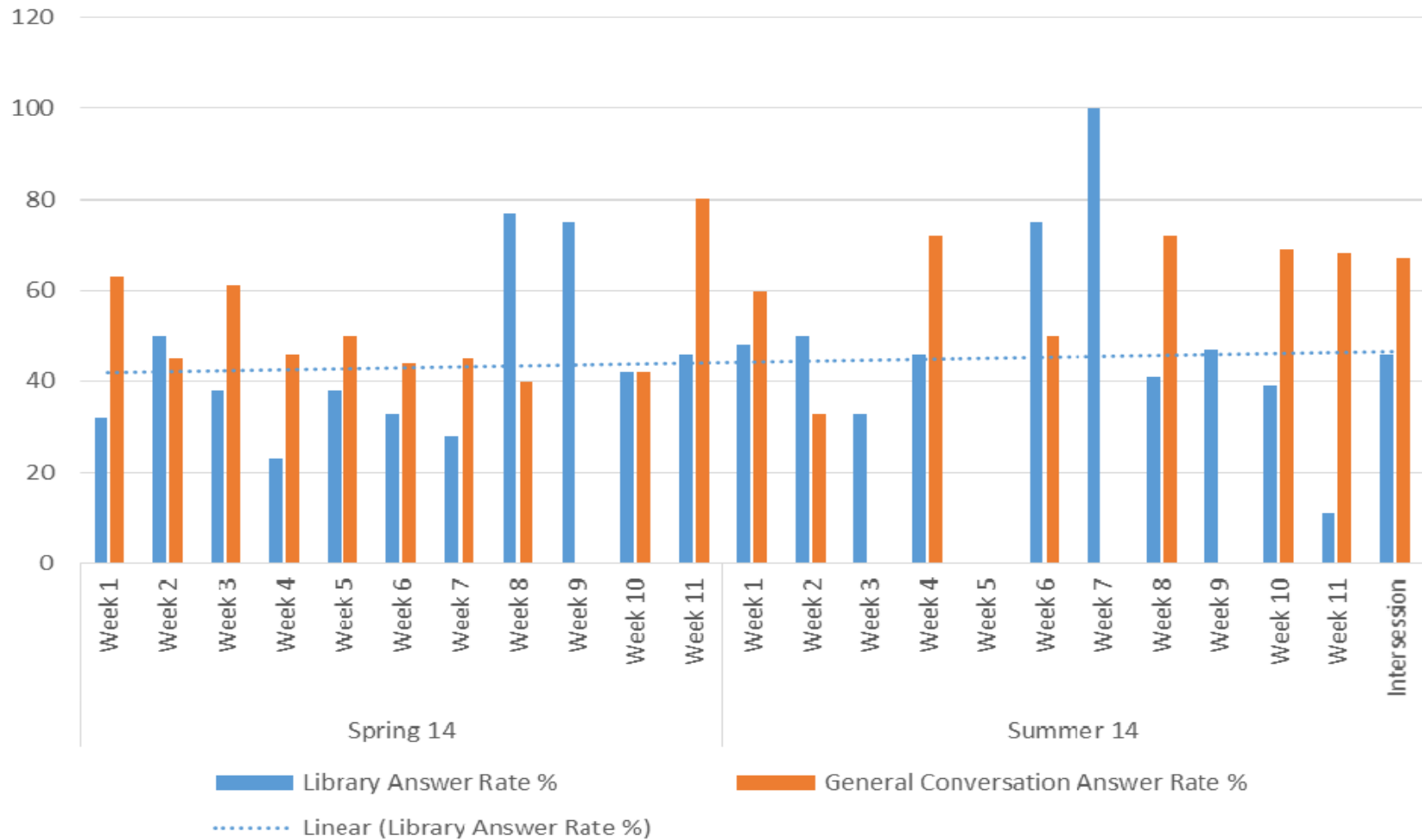
Timestamp: 10/5/2014  
 Hour: 4:54PM  
 Quarter: Summer  
 Week #: Intercession  
 Day of Week: Sunday  
 Total # of Questions Asked: 6  
 # of library questions asked: 3  
 # of library questions answered: 0  
 Answer Rate % (library questions): 0%  
 # of general conversation Q's asked: 3  
 # of general conversation Q's answered: 1  
 Answer Rate % (general conversation): 33.33%  
 Question Type: VPN  
 # of Research Questions:  
 # of Directional Questions:  
 # of Ready Reference Questions:  
 # of Equipment Questions:

[Return to Log Index](#)

## ANTswers Library User Input by Question Type (Questions or Statements)



ANTswers Answer Percentage Rate  
 (number of Q's answered divided by the number of Q's asked)





# TEXT ANALYSIS

Some top phrases containing 2 words (without punctuation marks)	Occurencies
can i	42
what is	30
is the	29
do i	25
how do	23
i am	17
i find	17
are you	16
where is	14
hours hours	14
hello hello	14
where are	14
where can	14
the library	13
is your	12
a book	12
who is	11
i want	10
do you	10
are the	10
i need	10
welcome week	9
you are	9
ok ok	9
langson library	8
library open	8
what are	8
hi answers	7
on the	7
i have	7

Some top phrases containing 3 words (without punctuation marks)	Occurencies
how do i	20
where can i	14
hours hours hours	13
hello hello hello	13
what is the	10
what is your	9
can i find	9
where is the	8
ok ok ok	8
do i find	8
the library open	7
is the library	7
where are the	6
i check out	6
is your name	6
hi hi hi	6
hi answers hi	6
who is the	5
ayala science library	5
yes yes yes	5
how long can	5
information on anteaters	5
on anteaters i	5
how are you	5
can i check	5
answers hi answers	5
tell me about	4
i want to	4
name what is	4
check out a	4

Some top phrases containing 4 words (without punctuation marks)	Occurencies
hours hours hours hours	12
hello hello hello hello	12
where can i find	9
ok ok ok ok	7
what is your name	6
how do i find	5
answers hi answers hi	5
information on anteaters i	5
hi answers hi answers	5
can i check out	5
is the library open	5
hi hi hi hi	5
do i find the	4
yes yes yes yes	4
i need information on	4
i check out a	4
maximum number of renewals	4
i am looking for	4
how long can i	4
how are you today	3
i have the call	3
time does the library	3
librarian who is the	3
access opposing viewpoints database	3
time is the library	3
name what is your	3
need information on anteaters	3
what time does the	3
is your name what	3
how do i print	3






## I WANT A BOT – WHAT ELSE SHOULD I BE AWARE OF?

- Creating a chatbot is a LOT of work!
- You must be comfortable with releasing Beta software – i.e. before it is “perfect”
- Have a thick skin – It’s amazing what people will say when something is anonymous.
- People are literal and they do not read!
- You will have coworkers that tell you that you are wasting time – usually for polar opposite reasons!
- Staff will want to mine the text – what are our users saying?






# Create your own chatbot!



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[Advanced Search](#)

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## UCI Libraries' Chatbot Files (ANTswers)

UC Irvine

 [RSS](#)

**UCI Libraries' Chatbot Files (ANTswers)**  
Danielle Kane  
Research Librarian for Emerging Technologies  
949-824-2024  
[kaned@uci.edu](mailto:kaned@uci.edu)  
<http://antswers.lib.uci.edu>

[About Us](#)  
[Contact Us](#)  
[Policies](#)  
[Submission Guidelines](#)

ANTswers is an experimental chatbot that can answer questions about the UC Irvine Libraries. ANTswers is a web-based application, run on a remote library server and is accessed through a web interface page. ANTswers' personality and persona is based on the UCI mascot, Peter the Anteater. ANTswers responds to simple and short questions. The first link in a response opens in a preview window, all other links open in a new window.

This collection includes approximately 130 .aiml files that are available for download and for the use in creating other library chatbots. To implement your own library chatbot you will need a server, chatbot software (we used Program-O), editing software (we used Notepad++) and at least minimal experience with HRML, CSS, Javascript and AIML. ANTswers is built for an academic library with 2 main libraries, a study center, special collections and archives, and a law and medical library. You will need to review and edit each of the files for your particular institution.

There are 120 publications in this collection, published in 2014.

### Paper Series

- ▶ [Chatbot Files](#)
- ▶ [Conversation Files](#)
- ▶ [Library Files](#)
- ▶ [Ready Reference Files](#)
- ▶ [Subject Files](#)

[https://escholarship.org/uc/uci\\_libs\\_antswers](https://escholarship.org/uc/uci_libs_antswers)



THANKS!

Kaned@uci.edu

There's a bot in my library: <http://www.slideshare.net/dakane/kaned-chatbot-sciug>