**Current progress: 7/6**

-trained for FAQ - using a CSV dropped in synonyms to bring up FAQ answers

-connectivity to slack. Could easily do fb messenger, google assistant

-webhook: will automate sending confirmation email to client (Zapier).

-cloud connectivity: can create tickets in google cloud log by adding cloud to package json -> could add connectivity to oakwood dbs? Intranet?

-want to access info from read-only view of BI data warehouse, address getting customer docs from oscar and siebel last

-want to test reading in info from gsql: Have a db in gsql ready to follow [this](https://stackoverflow.com/questions/45933303/how-to-get-results-from-mysql-db-using-node-js-mysql-and-send-them-back-to-api-a) tutorial.

-integrate with google sheets API: can connect to sheet and read value, need to figure out how to edit the JSONs like the weather api example in order to output in the dialogflow console

-[Nolan’s](https://docs.google.com/document/d/14ttrRBcUteAcXfUwx9Z_kYV8QW9lpOxSo1-aixsChL0/edit?usp=sharing) projects

-can integrate to cisco spark - is that the same as webex?

-avg price bot uses csv of avg price data for each city by BI.

-yelp and weather abilities

**Points of Contact:**

Joanna, Alex - ideas and permissions for Oscar & Siebel

Kaleb, Mark - “SQL Gods”, how to pick out data we want from data warehouse

Stacy - how do front end people actually use the stuff, what’s good data and what’s not

**Problems Encountered:**

6/27 1. Limitations to free access from Firebase & Cloud services

-WeatherSample API key: to parse data from a third party site from directly within the fulfillment functions using the API key, would need to upgrade to firebase blaze (certain amt of free stuff)

-Zapier webhook: free trial, and catches webhook, has built in code to send information back out via email. Could we write our own code to do that

-OW API’s: what API’s could give us info from oscar (user docs), the website (faq type stuff, booking), so that sending a webhook would return proper info instead of this third party app returning the info.

-Potential issue for us: have 5g free of requests but could potentially have too much data and blow up w charges or request too fast resulting in DDoSing

<https://firebase.google.com/pricing/>

6/27 2. Need an API to return info to webhooks (need to write JSON req/resp for webhooks)

Mimic the way booking info would be pulled from ow dw using bigquery to pull info from tables

Reasons bigquery couldn’t be used outside of testing:

1. “You cannot create an external table that references data stored in a region different from the dataset's location. For example, if you are creating an external table in a US-based dataset, the Cloud Storage bucket containing the data must be a regional or multi-regional bucket in the US” wouldn’t necessarily work for emea and apac data unless theyre stored in US based dataset
2. Rapidly changing data (like pricing updating every night) would need to be uploaded a lot and its like do we want to move everything to the cloud whether that is making a copy or just changing everything to store it there?

Test: integrate bigquery public tables with a dialogflow agent

Could use SDK and python or try to use google in-line

<https://www.youtube.com/watch?v=O5TFAvQrkeM>

<https://discuss.api.ai/t/backend-for-my-chatbot/8271/4> - tip, does not use bigquery tho

1. Write webhook logic hosted on google cloud - video deploys code to google app engine
2. Call the webhook like dialogflow samples

6/28 3. ~~Creating a CSV is very slow from Siebel~~ will be using data warehouse

7/13 make sure that API key is not accessible to the user because if they wanted they could push our request limit and charge or break the app even

**Meeting 6/27 w Joanna and Alex**

Price and availability info is not sql

Potentially start w oscar to understand tenancy - lots of info, but need api to access

Next steps:

Siebel - recognizing user phone numbers and what not. Already has an api webservice.

Meet up with ron or joanna to learn to use/search siebel

Have matt download tools to start writing code 6/28

Alex recommends Xmlspy for webservices templates, fiddler, visual studio (no python), sql tools

**6/28**

New software: XMLSpy, Fiddler, ~~still need SQL tools.~~ SQL Server installed by ludwig

-use XMLspy to write json requests/responses for webhook

-use Fiddler to track https requests (sent by webhook from dialogflow)

-use SQL Server to write logic to look up in BI Data Warehouse

Ideas:

1. Send requests to siebel over intranet for cust docs
2. ~~Download CSV from siebel and send requests to that~~
3. Use BI data warehouse for as much as possible

Need:

1. Understand how price widget was made, how can we use it.
   1. Combine “LA” “Los Angeles” “US-LA” etc
   2. Write code to present output in table
   3. Call data from specific city using format written in b.
2. Access to data warehouse read view from Kaleb
   1. Mimic Price Widget above

mySQL with DialogFlow: ideally can mimic this process with SQLServer/data warehouse

<https://stackoverflow.com/questions/45933303/how-to-get-results-from-mysql-db-using-node-js-mysql-and-send-them-back-to-api-a>

**Meeting 6/28 w Kaleb and Stacy**

-Get sql installed, get access to data warehouse from kaleb

-Source from production

-Will set up meeting next thursday to talk about how to use sql to get the particular views we need

**Google Cloud platform**

On solson google cloud, Uploaded [this](https://docs.google.com/spreadsheets/d/182HvHmIiC2XPFcQ_Fjd-W3zzvDMa28empJFNmFTWaz4/edit?usp=sharing) sheet as a CSV into the database ‘another’ which now has the filled table ‘entries’. 20 contacts from siebel w last name olson.

Trying to follow the tutorial, how do we write the JSON request and how do we tell it to use SQL commands/syntax like the SELECT etc?

<https://www.youtube.com/watch?v=rTXzKRhT4d4>

<https://www.youtube.com/watch?v=kdk6MhhI8oc>

**6/29 and 7/2**

S- Been working on integrating Sheets API. having trouble with authentication and permission. Which is a good thing because secure, bad thing because kind of complicated.

For custom json requests, comparing to WeatherSample on google.

-connecting to sheet just fine but not logging the cells

-does not always run all logs? Why nothing printed to firebase console

-missing fulfillment request: “outputContexts”

-so then missing response with fulfillment text

<https://www.npmjs.com/package/google-spreadsheet>

List of Firebase Functions that may or may not be useful:

<https://github.com/firebase/functions-samples>

**7/3 Ron Meeting**

Learned how to create Siebel opportunity and how it communicates with oscar to check for availability. Also saw Epic/Epic 2.0 but need to get access

**7/5**

S- I think we need to get visual studio or some IDE to more easily write the back end custom JSON requests that the webhook will use and SQL calls to db

-google sheets: what if you wanted to go the other way? Whose number is \_\_

-change variables so use $phone-number and $name

**7/6 - More APIs**

<https://www.programmableweb.com/apis/directory>

-stuck on google sheets api a little bit, what else can i do?

-has examples of data from individual cities: api’s for baltimore parks, pools, etc.

-ideally want something like trip advisor that has things to do

[-Microsoft Bing Maps Query API](https://www.programmableweb.com/api/microsoft-bing-maps-query)  
The Microsoft Bing Maps Query API enables application users to do map searches based on area, location, route, property type (such as restaurant), property ID, and more. For example, users can search for all restaurants within 10 kilometers that serve Italian food and request that only the restaurant name and location information is returned.

-[Google Maps Places API](https://www.programmableweb.com/api/google-maps-places)  
The Google Maps Places API is a service that returns information about a "place": an establishment, a geographic location, or prominent point of interest using an HTTP request. Place requests specify locations as latitude/longitude coordinates. Methods are available for place search, details, photos, and autocomplete queries. The Places API returns mapping data in JSON and XML formats, after making URI requests, and authenticating with API Key

[-TripAdvisor API](https://www.programmableweb.com/api/tripadvisor) -APPLIED FOR ON 7/12. FREE IF APPROVED BUT MUST FOLLOW ALL TERMS AND CONDITIONS

[-GogoBot Search API](https://www.programmableweb.com/api/gogobot-search) -NOT FREE UNLESS CAN GET TO SIGN A $0 FEE

[-Yelp Fusion API](https://www.yelp.com/developers/faq) - free

**7/6 Shree Meeting**

Ryan nyi - check if service center has webex so we could integrate

Property profiles - see if can download numbers. Emailed rodrigo cumha for list of properties and phone numbers. How would we keep this info up to date?

Can ask shankar about support.oakwood.com - update it?

Hippo api’s: rodrigo for siebel and alex for oscar one. Apis already exist so look into using those

Next steps: try to deploy faq bot on facebook page, on the site. So we can see QA/testing.

**Fb messenger integration**

Bill Keffeler: Do we have a facebook workplace account?

Phone call: There is a public oakwood page. says that he wants to keep everything centralized. So rather than screwing with their current model (probably mkting department thing) would make a separate page and hook the bot up to that. Eventually they could integrate it. Shree just wants to see it get on FB.

-bot must be approved by fb testing: 2 days - 2 weeks.

-messaged July 7 and no response sent

-approved but need to have business profile confirmed. Then could add page to OW main page

-survey project with Alex Ho coming up. Same thing, fb integration. W surveymonkey

**Leadership mixer 7/18**

Put out sample bot for vps to ask questions on. See if they can break it. Check with matt to see if we can get a work station.

-combine intents from several bots into one to make the all-encompassing bot

-play with special characters to format the bot description when pulled out in google assistant so it has sample questions on the side

**7/9**

Use follow up intent to be able to print out responses from webhook.

Have been emailed an excel doc with company phone numbers. Could read into that using this: follow up intent can read after the original intent searches and gets the cell data.

**Meeting 7/10 w Kaleb - SQL server overview**

-UserDB has pricing information. Go to views

-select \* from V\_EPIC\_TOP\_CITY to get pricing info, would be able to replicate pricing widget

-most of the views read from BI so need to have access to that db in addition to userDB (email matt)

-sample sql code

SELECT

MARKET

, APT\_TYPE, COUNT(\*) REQUEST\_COUNT, SUM(QUOTED\_RATE\_USD) TOTAL\_QUOTED\_RATE

, MIN(QUOTED\_RATE\_USD) MIN\_RATE

, SUM(QUOTED\_RATE\_USD)/COUNT(\*) AVG\_RATE

, MAX(QUOTED\_RATE\_USD) MAX\_RATE

FROM

( SELECT

( CASE WHEN MAP.MAPPED = '' THEN D2.MARKET ELSE MAP.MAPPED END ) MARKET, -- 1/29/17 update

FR.QUOTED\_RATE\_USD,

FR.PROVIDER,

FR.APT\_TYPE APT\_TYPE\_SOURCE

, ( CASE WHEN APT\_TYPE LIKE '1%' THEN '1F'

WHEN APT\_TYPE LIKE '2%' THEN '2F'

WHEN APT\_TYPE LIKE '3%' THEN '3F'

WHEN APT\_TYPE LIKE '4%' THEN '4F'

WHEN APT\_TYPE LIKE 'S%' THEN 'SF'

ELSE 'UNK' END ) APT\_TYPE

, CREATED\_DATE

FROM OAKWOODBI.dbo.FACT\_RFH FR (NOLOCK)

INNER JOIN OAKWOODBI.dbo.DIM2\_RFH D2 (NOLOCK)

ON ( D2.EFFECT\_TO\_DT IS NULL AND D2.CUR\_RFH\_ID=FR.CUR\_RFH\_ID )

LEFT OUTER JOIN META\_EPIC\_CITY\_MAPPING MAP (NOLOCK) -- 1/29/17 update

ON D2.MARKET = MAP.MARKET

WHERE D2.MARKET Is Not Null

AND FR.QUOTED\_RATE\_USD Is Not Null

AND FR.QUOTED\_RATE\_USD <> 0

AND FR.APT\_TYPE Is Not Null

AND ULTIMATE\_STATUS = 'Booked'

AND CREATED\_DATE BETWEEN (DATEADD(YEAR, -1, GETDATE())) AND GETDATE() ) R

GROUP BY MARKET, APT\_TYPE

Info to query for:

1. Apartment pricing questions: use above code for looking up avg cost in city, number of bookings its based on. Can use RSVP bot and then add on SQL server lookup
2. Tenancy related questions: BI has names, emails, phones, length of stay (date in / date out), days until move in, apt type, reference numbers. Q’s like “can i extend my stay” will need to be real time out of siebel bc what if something got booked today. Tenancy key: specific to booking. Tenancy id: id of the place. Current and previous

Next steps: 1) get visual studio, see if can get an easy back end going to call the sql commands and then watch tutorials to fight with integrating it with dialog flow. 7/11

2) set up meeting with rodrigo to see how he hosts stuff on oakwood.com - tues 7/17

3) train and test FAQ bot so can present at networking mixer

Tenancy info: for records w/in the last year it looks like names have only been stored in TNT\_FIRST\_NAME and not at all in the last name field.

Python: cant download any more packages via visual studio bc of permissions

Alex doesnt like it

C# might be easier to use than C++ - look into it

Visual studio can host stuff similarly to firebase - called azure. Can also directly connect to database server easily.

Yelp bot - can get info easily but need to be able to print rich response w branding?

Potential to do: get lat and long of properties and use that as the location instead of just the city

Trying to allow it to put in any type of location, but it needs to be a string and sys.location is an object

Use sys.any so they can search anything as the request instead of forcing synonyms?

**Meeting w Suzanne and Kathleen**

-introduce general types of questions that people can ask

-interface: put up on the screen or have a few computers out

-have a paper up on the wall with suggestions

-have the other interns help present it?

**Intern Meeting 7/17 Points:**

Before: send link to web pop out and oakwood faq page on fb. Attach q handout

Agenda:

1. What and why r we making this thing
2. Y r yall involved with this thing
3. Bot functionality
4. What does this mean for the mixer

Just go with the flow with what Kathleen and Suzanne envision - we had a meeting w them to make sure we weren’t totally just overthrowing their event but they were rly stoked abt using the bot. Not sure exactly what they have planned for the networking part of it, but they expressed it to us like this:

**Shree 7/17**

Search reservation number bc internal

To pull up docs from oscar

Kevin or ryan to get thru access hurdles

Have alex use api calls to read from siebel

Joanna will know where the data is stored

See if can throw the bot into the app - alex f

-make timeline for ability to access user docs (alex)

-get user for BI so can pull/host info the way that web guys do it

**Intern Meeting 7/17 Common probs**

-address complaints

-what properties are there / what properties are popular - get spreadsheet of addresses

-where can i stay

-follow up q’s for rate inquiries: ‘what city’ ‘what type of room?’

-who are your competitors -> whats the difference btwn oakwood and a hotel

-cancel tickets

-ask for phone number for booking

Booking agent ‘Test1’ what if they search the location right off the bat

Yelp agent how do we get it to put in any search term and not match to the entities but not fuck up the other intents by sys.any

Yelp, availability questions how do we get it to

CSV of property names, cities, addresses? Then can use addresses in yelp search, can answer if we have buildings in a city,

\*\*want to access tenant documents!! And live pricing widget by calling warehouse.

\*\*also see if can drop FAQ bot into the app

**Problems from mixer**

“Do you have properties in Paris”

-query city, return sum of bldgs

-handling typos: hardcode common misspellings or see if there is a free spellcheck API

**7/20**

Things we want to do next:

-make timeline for ability to integrate user docs

-make calls to DB and put it up like how the pricing widget was hosted

Resources:

-have BI username and password so can make calls to both DWPRDDB, DWQADB from cloud shell or visual studio (would need to host it somewhere: Ludwig will get back to nolan. Can continue using the cloud platform and hard coding but it is slow)

-1pm meeting with alex to learn how to access service track and use some of the echosign api’s

-think about how we are going to split up functionality of bots and test them separately

**Alex meeting 7/20**

-build clients that connect

-Start w fiddler or xmlspy

-Servicetrack has a webservice

-create a solution in vs to

-document table for tenant id then tenant list table

from oscqadb go to INT\_QA table

that is where the documents are

to make request its reservationid-tenantid

<http://oscarqa/OscarAPI/api/echosign/getDocument/resid-tenid>

SELECT TOP (1000) [ndechoid]

,[ntenaid]

,[docname]

,[dockey]

,[docemail]

,[dcreate]

,[ncreate]

FROM [OscarINT\_QA].[dbo].[docecholst] where dcreate >= '5/1/18'

select \* from tenantlst (NOLOCK)

where NTENAID = 917969

then use tenant id in tenant list table

post link to document in fiddler

will get json request

put nolock on sql server calls so as to not lock anyone else out of the table esp when ur just viewing

build a miniclient to call the API. use visual studio

using web app

get token and key from api after building the client.

test the connection

need to talk to shree about our guidelines because need a more clear cut idea of what we are writing code to do - like how do you get reservation id out of the customer

joanna tammi (business process manager) and alex for what will work and not work in terms of collecting all that information

For now - pull doc status and ticket status!!

An article that may help with challenge verification / verify token <https://dzone.com/articles/messenger-bot-with-dialogflow-and-golang>

**7/23**

1. Document lookup

-currently, only way to look up documents is resid-tenid. The customer is not going to know that

-what information do you want the bot/UI to request?

Ex that may work oakwood employee going to have to ask for name

(can search in OscarINT\_QA. as like ‘%name%’)

But there may be repeats of names in the system (tbd example) or there was a couple “x and y smith” on the doc name.

-What direction do we want to go? Can do a UI with ten/reservation id spitting out docs instead of a full blown responding bot.

1-if we make a UI that’s local (not online bot), can use this game plan:

1.query OscarINT\_QA docecholst for %name%

2.query OscarINT\_QA tenantlst using that ntenaid to get nreseid

3.append nreseid-ntenaid and push to OscarAPI to get payload of docs

4.parse response for doc urls

-BUT is that actually faster than pulling up in oscar? Would want to talk to tammi bus proc

-need Access4Intern login information to work in OSCQADB (not just windows auth)?

-Sales person who booked the appt is recorded as ctenaattn and in many cases the tenant name ctenaname is recorded as the company client not the actual person staying

2-But if we want to continue to use the bot format:

1.get access4intern to work

2.query for %name% and tenantlst for nreseid

*3.write client to get token authorization for OscarAPI*

4.then push nreseid-ntenaid to OscarAPI

5.then get docs

2. Pricing API:

-met w shankar, we have access to the DB that is being used for pricing widget, and could potentially update it to be monthly, but still dont know fine details or how they are hosting it on the ow website as a widget (ask for code?)

3. Bot updates after mixer

-FAQ is definitely ready to be client facing as is

-what functionality to we want to go on to the bot hooked up to the facebook page? Because people were asking a lot of random things but do you want us to be able to answer everything?

-if so then can spend more time training it and perfecting it.

-could also meet with sara / other marketing person who responds to FB messages, talk to bill more/again to see what he wants.

-updated the yelp search bot so it works with sys.any. Where should i put it?

-people ask ‘do you have properties in xyz city’ but as far as i can tell the databases i have access to do not have a master list of the properties. Might be nice for yelp bot too to be able to add “what oakwood are you staying at” and search from that address

-Instead of using the API to return doc links maybe search siebel itself

-the customer agent is going to confirm with the user before sending out docs

-goal is to open up the doc.

**Shree 7/24**

-goals: by next week

1. Talk to Janet to see how WSSC goes about looking up peoples info
2. Meet with Kaleb to understand how to get dialogflow connected to DB
3. Take info from Kaleb meeting to understand how to get docs connected
   1. Instead of using API may be able to look into Oscar itself so can search by name and location rather than limited by reseid, tenaid.

[**https://docs.google.com/spreadsheets/d/1fzDAxnNQudwvtqkyhQdcemUcpCaRFn3Zr-vILq0U3BI/edit?usp=sharing**](https://docs.google.com/spreadsheets/d/1fzDAxnNQudwvtqkyhQdcemUcpCaRFn3Zr-vILq0U3BI/edit?usp=sharing)

**Telephony 7/25**

Can now have the bot speak to people over the phone and can transfer the caller to a different number -> forward to the WSSC or whatever

-kaleb scheduled. Schedule janet, get invite from a,j,t

-probs w website: many random phone numbers posted online

**7/26**

Janet: -oscar search is convenient

-can pull up info based off a lot of criteria then show history, send docs, etc

Kevin: -bad idea to connect straight to database

-create a way to let him send data to us

Can we use <https://cloud.google.com/products/data-transfer/> ?

-would write something on his end to send to google cloud storage

Kaleb:

Showed how to download to public folder but thats only still on our network so that wont work

APIS for transfering data:

**CLOUD SQL**

Set up cloud sql with public ip?

<https://cloud.google.com/sql/docs/mysql/connect-external-app>

Importing into sql:

<https://cloud.google.com/sql/docs/mysql/import-export/importing>

How to transfer:

<https://docs.bitnami.com/google/how-to/migrate-database-cloud-sql/>

Allow database updates?

<https://cloud.google.com/sql/docs/mysql/admin-api/v1beta4/databases/update>

Connection options

<https://cloud.google.com/sql/docs/mysql/external-connection-methods>

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**CLOUD BUCKET STORAGE**

Allow transfer to google cloud storage?

<https://cloud.google.com/storage-transfer/docs/>

Permissions

<https://cloud.google.com/storage-transfer/docs/iam-transfer>

**7/27**

T,j,a q’s:

-kevin is going to get us a properly set up Google Dialogflow Enterprise account. Will take him a day or so to get proper access.

-he is going to write something that will push the pricing data we need to one of google’s storage options on the cloud bc it is a security issue to go straight into the databases.

-janet showed us how the siebel interface is currently used to look up customer docs and i think its pretty intuitive and fast.

**Facebook Survey Integration**

Surveymonkey goes straight into fb messenger.

Works like a bot, so would need it to come from a different page than ‘oakwood faq’ because not sure that we can have multiple bots sending messages from the one page

But in order to send messages, does the person need to have an email address on file that is actually hooked up to their facebook?

How do we get their facebook profile? App phase 2 - log in w facebook?

Can create the survey w/in fb messenger too wtf

How many people take the survey right now? How many would we expect to take it when we move platforms over bc that would affect how much we have to pay for it

**7/30**

Pricing tool:

The flask server is an app that hosts the webhook so can connect to both dialogflow and the bucket. So just connect the So in theory could just drop the python code from VS backend into that flask server and it would work.

Think kevin will want to upload the view we need to the cloud as a flat file, so should still be a CSV. would go in cloud storage not GSQL?

-talk to kevin for timeline on secure ow account / pushing our table to cloud

-email shree abt timeline

-play with VS to make sure will return helpful information even if no exact city/mo combo

1. No data for that month
   1. Data for previous and next months if avail - done
      1. If no data on either adjacent months give avg yearly price: sum TOTAL\_QUOTED\_RATE / sum REQUEST\_COUNT to get yearly avg
2. No room type
   1. Return similar market names for that room type
   2. Return other room types for that market
3. ? Return possible alternative markets for that room type, month
   1. Table we’re pulling from doesnt have state or country info - how do we know what other ones are similar enough to query
      1. Could have kaleb put in state (country) or even lat, long if they have it
      2. The table is only epic TOP cities: do we want to expand to all cities?

-to do for Shree meeting: complete ATR chart. Think about calendar for rest of internship. Ask his opinion about fetching documents given oscar interface already (should we bother?)

-plot over remaining 7 weeks, tasks in no particular order

**\*from Shree’s initial project proposal**

1. decide how to split functionality of bots
2. Get online with Google Enterprise, OCOMQADB1\dbo.V\_EPIC\_TOP\_CITY\_V2 on cloud
3. Decide what kind of integration WSSC would want to use for pricing
4. Integrate FAQ Fb page with Oakwood page so it is usable (only one person has liked/followed the page. Meet with marketing abt responses?)
5. Make yelp payload better (put it on FB or with WSSC or with sales to help sell?)
6. Side projects: FB survey integration, sharepoint organization
7. Do we want to do anything with the dialogflow phone service?
8. **\*Decide whether to follow through with tenant document pull up**
9. **\*Train FAQ bot with ATR items**
10. **\*Deploy code for pricing bot**
11. **\*Answer “tenancy related questions” what are those**
12. **\*lookup ServiceTrack Tickets**
13. **\*ask for property phone numbers**

**31st-7th:**

* Transfer bot to kevins new google enterprise account
* Fine tune/train completed questions

**7th-14th:**

* Get connected to live pricing data using our flask server
* fine tune pricing function (maybe add state/country/long/lat key codes to return similar locations if query doesn’t return anything)

**14th-21st:**

* Train unknown questions (Ex: Who is bill keffler?, phone number directory)

**21st-28th:**

* Decide how we want to split apart bots. Where does the pricing bot go? Where does the FAQ bot go? (Ex: connect to fb page, put on website, put in app, phone number)
* Present to IT managers (show the running product)

**28th-4th:**

* Side projects? Create template for survey, support.oakwood, sharepoint
* Clean up fulfillment code, organize intents, document how to maintain bot?

**4th-11th:**

* Finalize bots
* Final presentations on 10th

Link shree to the fb page so he can use messenger bot to screen record for fb proposal

Reloquest and synergy

Half day: spend time w management to give them education session (panos kaleb joanna)

4th week or 5th week out of remaining 6 ~2 hrs to present what is the technology, capabilities, features, sample code, updating it

**8/1**

Project Chat Bot Production created by Kevin

Given access to storage settings

Look into REST API may be used to write script to automatically import once a month

Unicode errors in uploading csv: tried changing character set of table to latin-1, changing CSV to utf8 when saving as, changing to nvarchar, load local infile

What worked: exporting table from sql server using unicode, converting with notepad to utf8.

Uploaded data TopCityAug.txt to the cloud SQL instance. Need to automate import but w/e

Uploaded full FAQ bot onto this project. Can split it up later, just might need to ask kevin to fix privileges to connect more agents.

For today given ownership of the project. Will be downgraded later bc i have full admin rights rn.

Dialogflow can query the db and return info (hardcoded in fulfillment)

Can move it onto flask server if we want.

-avoid follow up intent to print: instead make a print function and call it at the end of the search functions?? Doesnt work.

**8/2**

Altered date to string

-python has ability to do “in”

-so would need to do a thing similar to sys.any so could do market like ‘%query%’

Rn with list of markets as an entity what if you search mexico city not LAT AM - MEXICO CITY

It has to match the market intent first which is problematic - adding synonyms is not ideal

Ignoring exception from finished function: y??

**8/3**

New agent that only searches price and thats it - see if can get the code right inline so we can use sql on the gsql db.

N- Difficult to use python flask server to connect to mysql: just have to search the bucket file

Also the search term has to match exactly right now

But using the flask is better because can print right away instead of using a follow up

Written so can return info for the month and for the season

**8/6**

New july 2018 data hasnt been uploaded onto the db we’ve been using - is that a problem?

Need to be able to locally download from the db (unicode), change to UTF-8, upload to the bucket, and then have the bot use the correct most updated bucket - write a script to automate but still need someone to run it?

Yelp search - want to be able to use sys.any but it’s not intuitive to say “search yelp” first. would probably have that as part of the customer service bot in case ppl are asking whats nearby a property

Ron velsaco or ryan mcevoy for a reference table of cities that make up the markets

[dbo].[META\_NC\_City\_State] has a list of the typos of how they might appear in the system and matches them to like Greeneville, DE or Mexico City, MX

**8/8**

Yelp callback is async now - not filling result array fast enough

Put onto flask server so don’t have to do follow up either.

-cant pip install flask or yelp requests tho because of admin block

“Whats popular” question - add suggestion/quick reply for regions

Think about where we can put suggestions in like google assistant does

-who can i contact? Put up suggestion cards of what type of issue ur having

fb survey:

-survey monkey you can put it right into fb messenger and we could build it quickly but need to pick a tier to pay for because have more than 10 questions. Then the data would be stored in survey monkey and can do whatever analytics on that acct. IAM access & what not.

-doing survey this way, would have to add a N/A option, can’t leave blank like on the sheet type survey because it’s a flow.

-what happens if they only take part of the survey?

-Dialogflow could use a series of follow up intents, there are rich fb messages like quick replies, but would take a couple of days to get it approved on to a fb page, and may need to make another page bc i dont think you can put multiple bots on to a single messenger

-how to export dialogflow responses for analytics? Pretty much have to go onto the bot and look at the history. A workaround to export with inspecting via chrome browser and then downloading a json - can change to csv and look at in in excel but someone would have to do all that

-how do we get ppl’s facebooks? Looks like have to select and send via the surveymonkey platform. You can turn on Anonymous Responses to prevent Facebook name tracking.

-admin: how would someone text in on behalf of the 100 people they booked for

-put more personal info into the bot responses to engage people

app->messenger (fb)

Proposal: solutions to having chat in the app

Ways to do it, pros and cons of each

-if you go to a webpage theres no history

-people will use the app so put as much stuff in the app as possible

Email shankar to find out anything abt chat feature that used to be on the website

Right now sign in on the app with email only

Guests be invited to the app this weekend

Production app login:

[OakQA1@gmail.com](mailto:OakQA1@gmail.com)

Oakwood22

QA login:

Heidyj[ames2@gmail.com](mailto:James2@gmail.com)

Oakwood222

Pricing tweaking: return seasonal rate instead of yearly rate if no month data?

Wording of single/double/triple should be changed to be consistent with 1f/2f/sf so call it furnished 1 bedroom furnished studio etc in the output

What if ask for rent per month instead of per night? Add wording per night or multiply by 30

What if dont want to specify season or month? Then return the yearly avg

“What is the rate right now” -> know what month it is & return this/next month data?

What if there is only 1 or 2 requests? “Dont have enough data”? Denver has $99 rate and a $983 rate for a studio in january -> avg is way blown up!

Once we decide what platform this is going on - if we for sure set it up for OW customer service people - will want to change the language so it makes the most sense for audience

Dont need to say “would you like” or anything like that if just returning info to OW people unless they intend to read the bot responses out loud to customers

**Shree 8/13**

**Finished:**

* The bot and flask server are transferred to kevin's account
* Pricing bot pulls from csv file in google storage bucket
* Trained pricing and added seasons and yearly follow up if data not found
* Fixed ATR
* Added quick response for popular locations

**Future:**

* Meet with kevin and get the csv file to update
* Finish adding new questions to FAQ
* Lunch with Alex

Floating chat bubble to bot so always accessible

Give rates for similar room types on fallback

Make up instructions/spec to send out to the photon guys to drop it into the app

-floating chat bubble like bofa or in the contact us tab

-might be hard to do the suggestion chips that are so easy to drop in in FB. could possibly write custom payloads for suggestions in the python code tho

-shree wants it into release 2 sprint 2 - if its going in to the app, should train some questions about all the functions in the app - how do i sign this how do i see my property etc:

-how do i see my property amenities

-how do i see my documents

-how do i see my service track tickets

Me: making it user friendly and sound like a person. Anticipating the kinds of things people will say to the bot, ensuring logical followups and flow of conversation, researching responses that are helpful but wont piss people off.

**8/16**

Roof ai: put info abt what you want to buy into the messenger and then it will connect them with a real estate agent. That might be something to look into. But we have the locations search and stuff like that

More product suggestion

Address customer complaints

More personalization - use the user’s name. To collect the name using fb graph api, would prompt them to log in with facebook (ow will receive your name, public profile, w/e)

Breaking up long ass responses:

-Send multiple bubbles instead of fat paragraphs

-would need to fight with follow up intents, contexts, events to customize payload for platform type (fb vs in-app)

**8/17**

Photon meeting: get a timeline for chat into the app - phase 3? Needs a lot of testing

Seems like need to make a whole interface and just use api keys / accounts to connect to dialogflow. Would be maintained by one of oakwood people in the dialogflow end.

Need an on/off feature for the chat in case it is broken / outdated needs a revamp

Elastic search can take care of typos

**8/21 IT Meeting Presentation Outline**

15 mins each scripted present to management next tuesday

**Potential Topics:**

-how it works (what we did, what google does)

-basic jargon

-what we’ve added since last time

-tricky parts of it (typos, flow of conversation, responses tht sound like a person)

-how other companies are using this type of thing / how we will use now

\*\*how to update it

\*\*how we can use it going forward / what we can add to it

**8/21 Shree Meeting**

Done: prepare for presentation with

To do:

-will need to figure out the best way to build the link to return

-site sorts stuff thats bookable so ask them to build out the links and the top

-may want to talk to shankar / site builders to see how they implemented the search bar. Want to reuse code if possible

-dont ask shankar today because its busy

-summarize execs from profile page on the site - done

-sort db by price and pull up cheapest / most expensive cities - done

-promote properties in big cities - sort by number of bookings

-card/link to property page

-easter eggs

Kendall borchers - wssc director - reach out and ask for log of chats bc she has that

Talk to shankar about city/country/townshi p

In the future, include contract pricing

Tie peoples searches to their guest profile

Really would be better if chat function could forward info to the ‘housing specialist’

-reimplement nolan’s reservation bot

**Outline:**

**SHELBY:**

* How to Make “What is your name?”
  + Create an intent
    - Training phases
    - Action and parameters
    - Response
      * Webhook vs non Webhook
* Chat the bot, Show how faqs works
  + Show popular locations and how entities work
  + Show how rich responses are different
* Show analytics
* Integrations
  + Web page, facebook, etc.

**NOLAN:**

* Training
  + Ask it “Who are you”
* Talk about pricing bot
  + How it is trained
    - Talk about entities (sys.any)
  + Python Flask server
* Steps needed to maintain / improve the platform
  + Someone needs to read and train in dialogflow (collects from all platforms: facebook, app, etc)
  + Work with marketing to implement promotions and ads in responses
  + If new FAQ’s are created in the company
    - The new responses will have to be added in
* How we plan to use it on FB messenger
  + Before: auto reply, then comm. Dept answers fb messages
  + Still have the ability to monitor/reply to messages
  + Promote use of the app
* How we want to grow its use
  + Photon designing UI, so to keep rich responses need to change some code
  + WSSC needs an easy interface to use to price search quickly
  + Add to oakwood website - want to have the ability to fwd messages to a live rep on chat platform (currently avail 9-5)

**Chat log notes**

-a lot of people have 2-3 questions in a row, how do we get the bot to answer more than 1?

-MOSTLY booking questions - give quote on bot using his pricing tool, otherwise reimplement nolan’s booking request and forward it to a “housing specialist” like the people who man the chat bot do already

**Link building notes**

-use google maps geocoding api to get lat/long, really all you need

-set date to tomorrow and then add 6 nights

-set bedroom from user input

-build out link with %20 for spaces and then return it to the messenger

-seems like the hot transfer is not going to happen: could switch over to a live person manning the chat instead

<https://www.oakwood.com/search?lat=34.0522342&lng=-118.2436849&city=Los%20Angeles&state=CA&country=US&moveIn=2018-08-24&moveOut=2018-08-30&rooms=1-bedroom>

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[

{"address\_components":

[

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["street\_number"]}

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{"long\_name":"Mountain View","short\_name":"Mountain View","types":["locality","political"]},

{"long\_name":"Santa Clara County","short\_name":"Santa Clara County","types":["administrative\_area\_level\_2","political"]},

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}

},

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"types":["street\_address"]}],"status":"OK"}

**Photon 8/27**

-theyll look at the SDK docs we sent them

-want bubble to pop out when bring up website? Or just have the bubble on the website too

**Google Geocoding API notes**

-**distance\_matrix**(*\*args*, *\*\*kwargs*) If you pass an address as a string, the service will geocode the string and convert it to a latitude/longitude coordinate to calculate directions. Might be useful for pricing bot

Similar thing in geopy that doesnt require API key

<https://github.com/geopy/geopy>

**8/30 agenda**

-training, presentation meetings

-save faq production environment, migrate webhook from faq1 to chat-bot-production

-train the fk out of it

-revisit chat logs in the drive

**Needs to be done before end**

-timeline for app implementation

-knowledge transfer, create some documentation

-give presentation

-fall? Winter?

**Shree 9/4**

-make documentation for dialogflow - shortcut to documentation, screenshots, py server

-train the pricing link builder, using some of nolan’s training

-need to fix city and search bar appearance?

-brainstorm a few more random q’s about amenities

-haven’t heard back about putting it on website or if my responses are approved

-one more knowledge transfer session

-call kendall and show it to her, thursday. Ask if she has documented any new questions

-discuss w augustus too on how we want to put it on the fb page

-separate w betsy, christine, augustus this week to get marketing thinking how to power this

-get some collateral they can read so they get ideas on how to market/promote it

-build webpage to host FAQ bot

-edit webhook to send a message when input exceeds 256 bytes **l=(len(Text.encode('utf-8'))**

**Presentation tips**

Feedback on the summer. Ppl they met, what did you do w your time, what did u think, takeaways, 20 mins given

Book signature to practice. Run by someone else for feedback

Coordinate so no overlap but present separately

Whats your point

What do you want from me

Whats in it for me

Lead and end w main point

Marketing dept website on sharepoint

Frequently used

Oakwood corporate ppt

Situation, complicaiton, key question

**Presentation outline**

Jess: experience, then dive into what she made

-goal for us this summer: bring AI to the oakwood customer

-here’s the situation with the chat platform

-in pictures, we want to eliminate this “all our chat lines are busy” in favor of an instant reply

-we want the chat to behave in a personal way and not give cold one-to-one responses

-how did we do this?

-new technology, a lot of the forums were reading for help are posts from june and july 18, beta features on the platform, we’re really on the cutting edge here growing with the tech.

-machine learning is not a scary thing, the bot is not going to get smart and tke over the company. Machine learning is essentially a matching algorithm that builds off of previous matches to “learn” patterns of user input and output. Dialogflow uses Natural Language Processing, a relatively new form of artificial intelligence that can break down human language into pieces the algorithm can understand and match to formulated responses. On the left here we have examples of phrases that came from archives of chats sent to the live chat. These are organized under one Intent, or question, and you can see the breakdown of the words that are going to help return an availability search. The right image is an example of the training that I can do, where I can review every question the bot is asked and match it to the list of 70 something questions I programmed the bot to answer this summer. Through this interface, the bot will be able to match new questions to existing ones, and allow me to create new answers that it will match the next time it is asked. Through this machine learning platform, the bot will become smarter over time, expanding the list of questions it can recognize and doing more for the Oakwood guest.

-after spending the first half of the summer building out the bot and exploring what it can do, i have more recently been receiving feedback from marketing and the service director at the WSSC about what we want to answer and how we want the bot to come across. I have been having a lot of fun writing out the bot’s phrasing myself, and had the honor of becoming its namesake.

Were going to have customer docs and live BI data returned but security threats

By planting bad info into the systems. Could still manage it in the future if we use the webhook to send echo sign documents. Will need to upload BI csv file

-second half: split the bots in two - pricing and faq. Split well imo according to our strengths and i’m happy with what i was able to make.

-What it can do -> screenshots

-where we can take it

-my takeaway of it, ow, ppl

Found a good niche w this project: harnessing tech that ppl are intimidated by, making it less intimidating, and making it useful for people.

Was cool how many meetings and conference calls i got to participate in - while i still have a lot of improvement to make with my presentation skills, it was really eye opening to me to see all the steps and all the collaboration that it takes to bring a project like the app or the bot to fruition. Its not just code the thing and launch the thing.

The culture at OW is really different than anywhere I’ve worked before - everyone was super nice to me the whole summer. Small stuff like saying hi to people when you walk by them has rubbed off on me.

Future in IT - we’ll see

Wed: build html to hold faq bot, finish excel

-nap, laundry, start bedroom packing, eat out of pantry, apply for jobs, rent insur

Thurs:

* jess presentation
* Train added intents, link building intent
* call in to do demo for kendall/augustus
  + Use fb messenger, ask if worth coding these types of responses for non fb
  + Ask if any features would be really helpful, rly want to see
    - ie handoff to live chat agent if we leave that on there
* Research handoff to live agent

Fri:

* add any kendall suggestions
* find ideas for marketing - like nolan’s idea
  + Fb card carousel of ads: code event to send them?
* Start presentation outline

Mon:

* brainstorm w mkting about promoting/using bots
* make presentation slides

Tues:

* Final shree meeting
* finish pres, practice
  + Book signature for run thru?

Wed:

* give pres

Thurs:

* go out to lunch?

Fri: done

**Notes: 9/6 scrum**

-Send excel spreadsheet with q and a to gary, david, april, aug - done

-Find out: can I export analytics or are they just in my google acct

Carrying over convos within the app - praveen team have not considered session management yet

-pricing question: say prices are available online and ALSO spit out the link

-availability question: spit out the link, has “fastest way to see pricing is online/phone”

-Greeting sets the expectation that it’s not a real person

-Draft out introduction and what it can do like “im erica” page and send to aug.

Would have them do it on the interface and then eliminate the welcome event for the app

Would need to separate the facebook one so it would still have the welcome event

**WSSC & Marketing Demo**

-just showed both bots

Pricing bot:

-want to include length of stay in the pricing bot (5 days diff than long term)

-would the WSSC actually use the pricing bot instead of a fast quote?

Faq bot:

-create google doc for marketing / wssc

-handoff to live agent important

-explore use of different languages - need to write them. Recognizes input but has no responses. Could formulate & plug in responses using google translate but grammar might not be so good.

**Notes for Brian knowledge transfer 9/10**

Show webhook and hosting code on google cloud.

Facebook messenger integration:

<https://dialogflow.com/docs/integrations/facebook>

Facebook developer console lets you make an app. You use the token to connect the app to your facebook page’s messenger.

Nolan is a developer for the app thats currently hooked up to the fb page, can add users as developers with their

-marketing spin: but we do run specials

-faster way to

-doesnt include tax but does include amenities

-add detail of whats included in price

**Shree 9/11 meeting - final one**

-accomplished: another transfer with brian, demo for marketing & comm, adding cards to the bot, reading some of april’s feedback, checking out lang capabilities

-clean up the bot. Copy intents that don’t work 100% over to another bot so can start fresh

-make presentation slides. Finish by today so can tweak, run thru tomorrow

-thursday: review notes and info sources and compile them into a doc for brian and ron

**9/11 photon mtng**

-what reservations did i have last month

-where can i find payments

-info icon has about screen. “Hi im your virtual assistant. What i can do”

-if people aren’t using the chat very muc can demote it to the contact us, hamburger, or top menu

-resend praveen the SDK’s and tokens