keeping track of the dishes

a ridiculously over-engineered solution to making sure
that I don't put dirty dishes into a clean dishwasher

chris becker
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@Cbeck527

the problem

the problem
a new interaction paradigm

the problem
a new interaction paradigm
the solution

the problem

- i'm an idiot

i'm an idiot

- ~~i'm an idiot~~

- too lazy to check if the dishes are clean or not

- i'm an idiot

- too lazy to check if the dishes are clean or not

- i'm an idiot

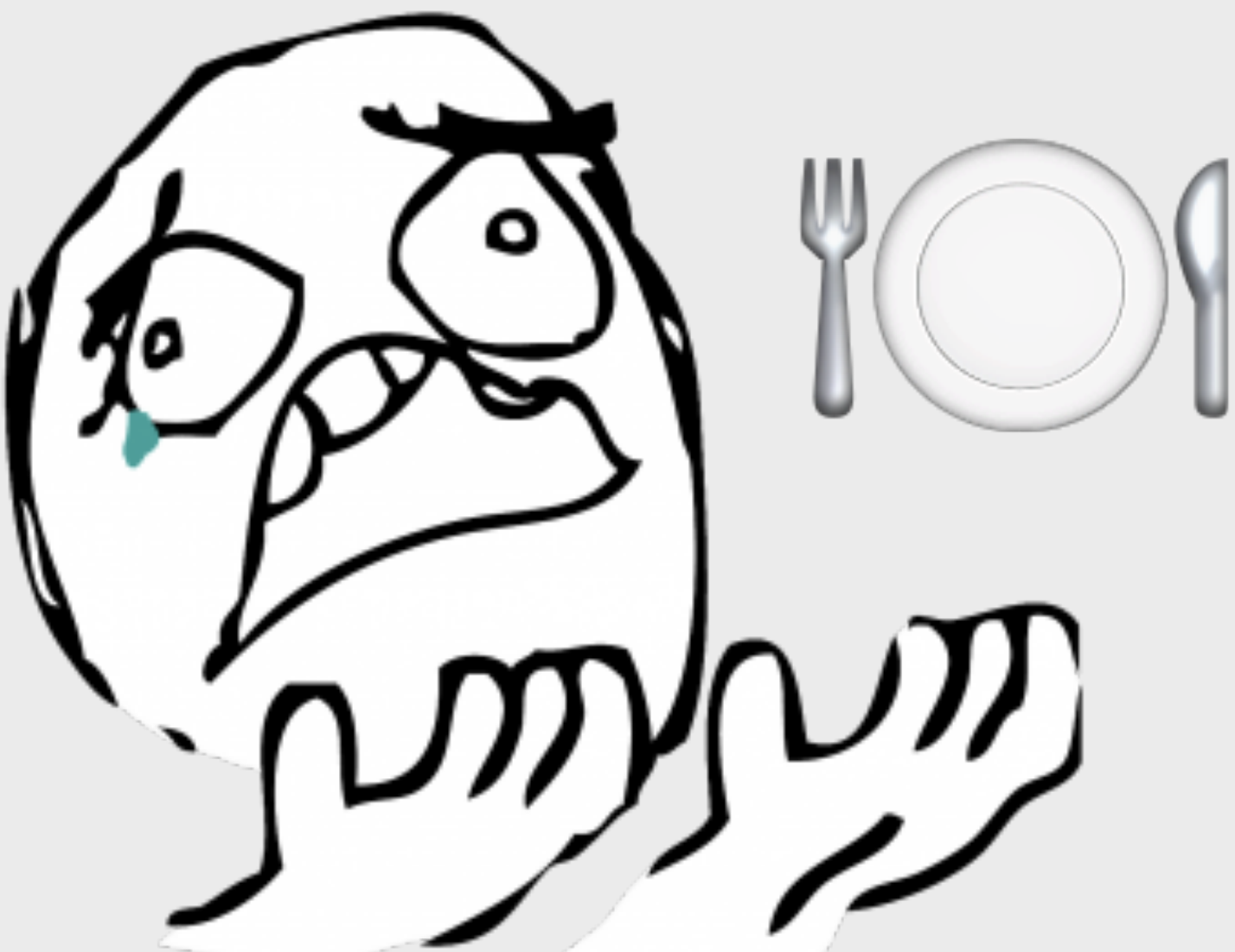- too lazy to check if the dishes are clean or not
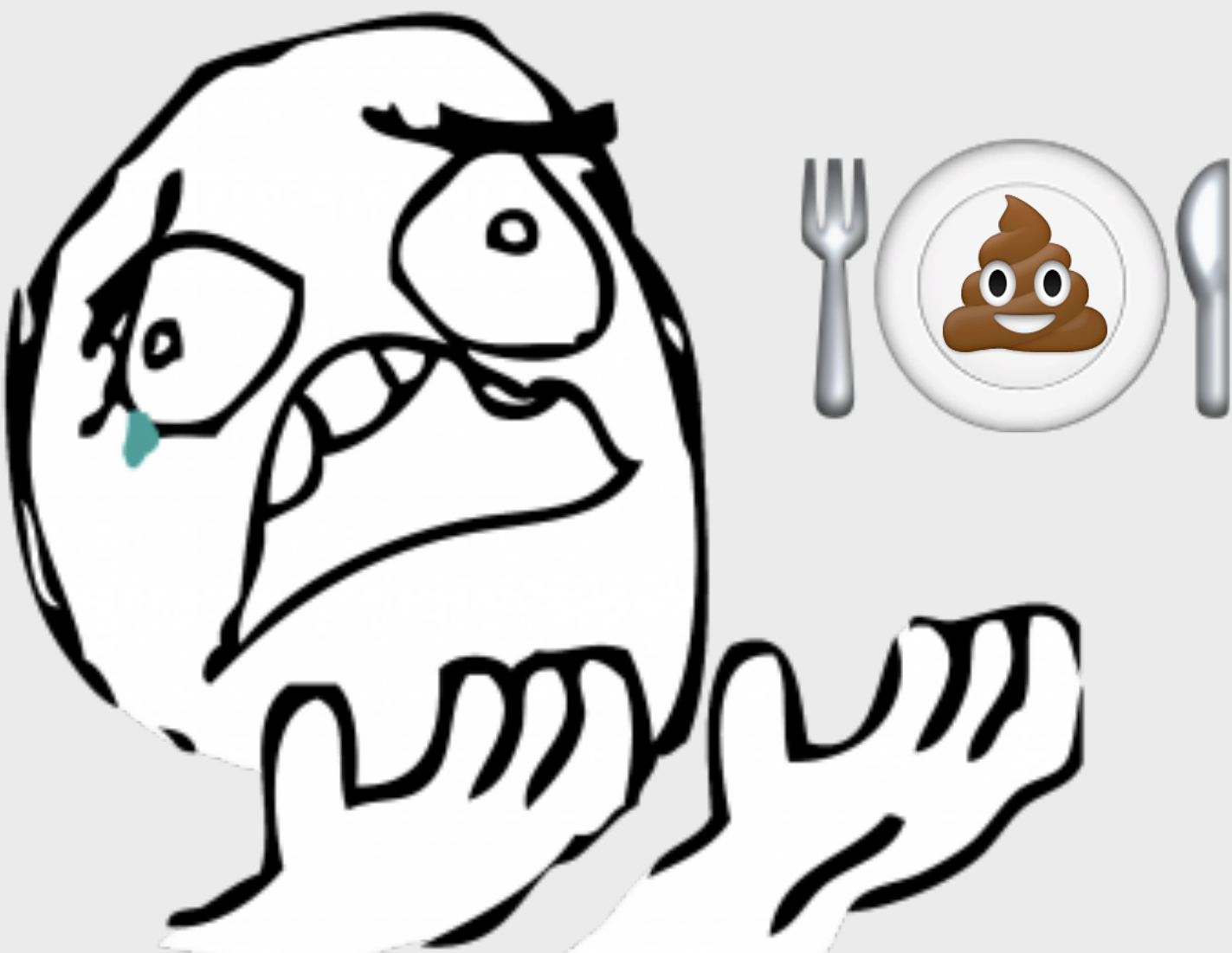
(true, but not important 🙄)

- ~~i'm an idiot~~

- ~~too lazy to check if the dishes are clean or not~~
  (true, but not important 🙄)

- forgetful

on several occasions i've put dirty dishes into a clean dishwasher 🍴🍽️

on several occasions i've put dirty dishes into a clean dishwasher

🍴💩🔪

yeah, probably

but what's the fun in that?

but what's the fun in that?

I like to build tiny, silly apps 🙃

anyway
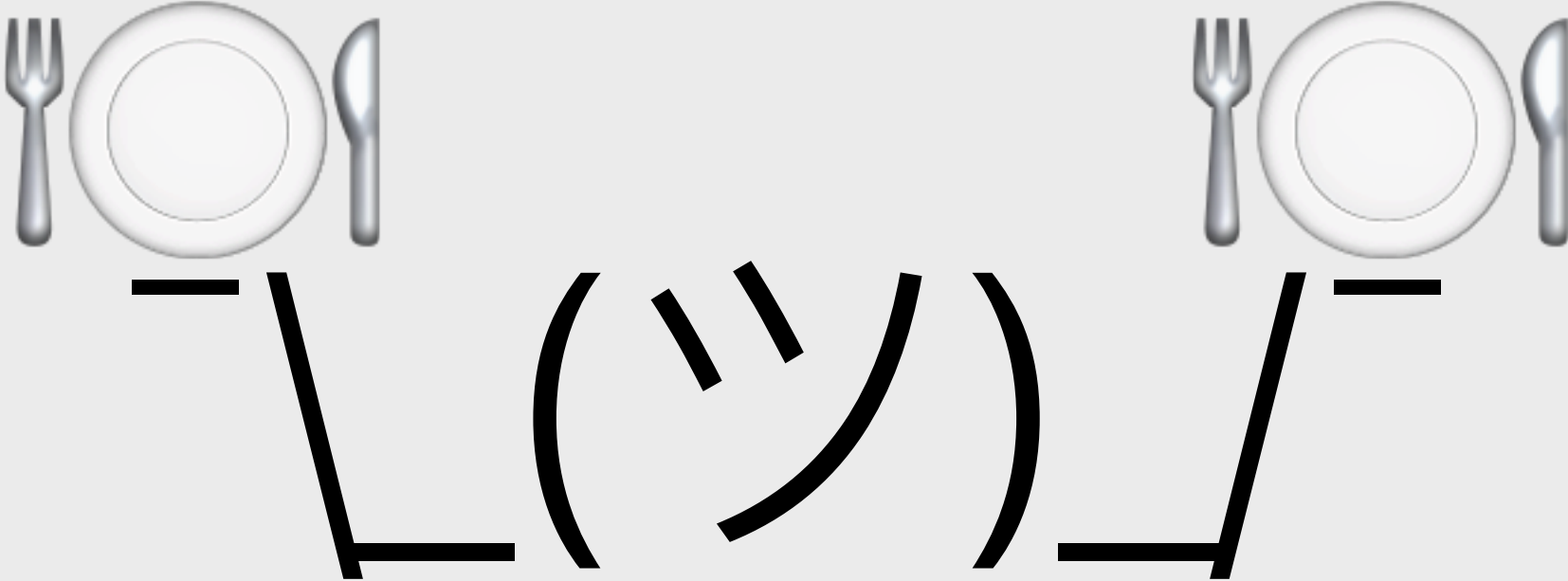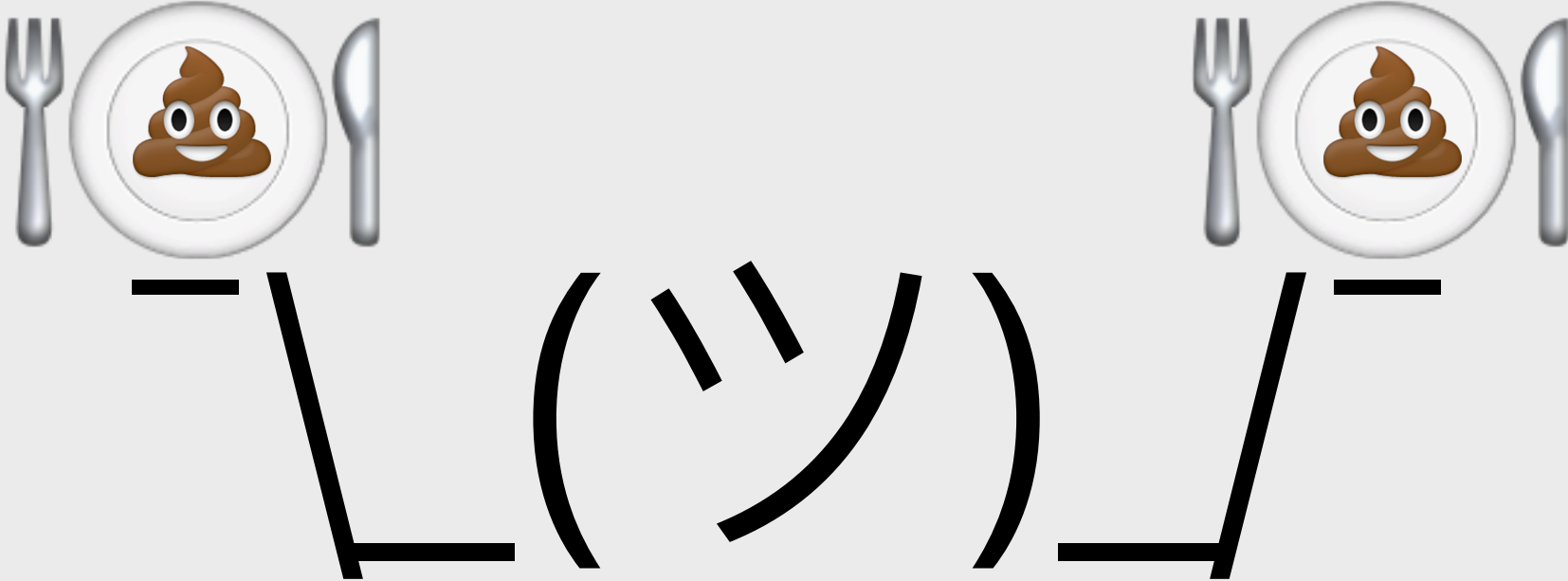
- Voice-controlled device

- Voice-controlled device

- Particularly useful in the kitchen, where your hands are dirty or busy

🍽️ ¯_(ツ)_/¯ 🍽️

🍽💩 ¯_(ツ)_/¯ 🍽💩

"Why can't Alexa keep track of my dishwasher, so I don't have to think about it?"

🤔

– Me (c. 2016)

The Dishwasher

Ask Alexa about your dishes

amazon echo

the solution

(where we get to geek out a bit)

Cbeck527 / the_dishwasher

Cbeck527/the_dishwasher ×

🔒 GitHub, Inc. [US] https://github.com/Cbeck527/the_dishwasher

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📖 Cbeck527 / **the_dishwasher**

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<> Code   ⓘ Issues **1**   Pull requests **0**   📖 Wiki   ⚡ Pulse   📊 Graphs   ⚙ Settings

A tiny app for your Amazon Echo that lets Alexa help you keep track of your dishwasher. http://dishes.io — Edit

⏱ **7 commits**	⑂ **1 branch**	🏷 **0 releases**	👥 **1 contributor**

Branch: master ▾   New pull request   Create new file Upload files Find file   Clone or download ▾

👤 **Cbeck527** Fix Alexa service ⋯   Latest commit ab02ac1 a day ago

📁 alexa_meta	Spruce up publishing info for App Store	a day ago
📁 lambda	Fix Alexa service	a day ago
📁 website	Add website	a day ago
📄 .gitignore	Update .gitignore	a day ago
📄 LICENSE	Initial commit	3 months ago
📄 README.md	Initial commit	3 months ago
📄 s3_website.yml.example	Add website	a day ago

📖 **README.md**

let's jump in!

define interaction model

define interaction model
configure backend

define interaction model

configure backend

write up publishing information

define interaction model

define interaction model

- JSON schema of "intents"

define interaction model

- JSON schema of "intents"

- custom slot types

define interaction model

- JSON schema of "intents"

- custom slot types

- sample utterances

```
{
    "intents": [
        {
            "intent": "GetDishStatus"
        },
        {
            "intent": "SetDishStatus",
            "slots": [
                {
                    "name": "status",
                    "type": "DISH_STATUSES"
                }
            ]
        },
        {
            "intent": "AMAZON.HelpIntent"
        }
    ]
}
```

```json
{
    "intents": [
        {
            "intent": "GetDishStatus"                          <-- intent #1
        },
        {
            "intent": "SetDishStatus",
            "slots": [
                {
                    "name": "status",
                    "type": "DISH_STATUSES"
                }
            ]
        },
        {
            "intent": "AMAZON.HelpIntent"
        }
    ]
}
```

```json
{
    "intents": [
        {
            "intent": "GetDishStatus"                    <-- intent #1
        },
        {
            "intent": "SetDishStatus",                   <-- intent #2
            "slots": [
                {
                    "name": "status",
                    "type": "DISH_STATUSES"
                }
            ]
        },
        {
            "intent": "AMAZON.HelpIntent"
        }
    ]
}
```

```json
{
    "intents": [
        {
            "intent": "GetDishStatus"          <-- intent #1
        },
        {
            "intent": "SetDishStatus",          <-- intent #2
            "slots": [
                {
                    "name": "status",           <-- slot type, name,
                    "type": "DISH_STATUSES"         possible values
                }
            ]
        },
        {
            "intent": "AMAZON.HelpIntent"
        }
    ]
}
```

```json
{
    "intents": [
        {
            "intent": "GetDishStatus"                    <-- intent #1
        },
        {
            "intent": "SetDishStatus",                   <-- intent #2
            "slots": [
                {
                    "name": "status",                    <-- slot type, name,
                    "type": "DISH_STATUSES"                   possible values
                }
            ]
        },
        {
            "intent": "AMAZON.HelpIntent"                <-- required help intent
        }
    ]
}
```

```
AMAZON.DATE
AMAZON.DURATION
AMAZON.FOUR_DIGIT_NUMBER
AMAZON.NUMBER
AMAZON.TIME
AMAZON.US_CITY
AMAZON.US_FIRST_NAME
AMAZON.US_STATE
```

clean
dirty
washed
unwashed
being cleaned

train Alexa with sample utterances

train Alexa with sample utterances

- define how our intents map to real-world sentences

train Alexa with sample utterances

- define how our intents map to real-world sentences

- indicate custom information in sentence

```
GetDishStatus about the dish status
GetDishStatus about the dishes
GetDishStatus dish status
GetDishStatus the dish status
GetDishStatus what's the status of the dishes

SetDishStatus that its {status}
SetDishStatus its {status}
SetDishStatus it is {status}
SetDishStatus the dishes are {status}

AMAZON.HelpIntent help me
AMAZON.HelpIntent how do you work
AMAZON.HelpIntent how it works
```

```
GetDishStatus about the dish status
GetDishStatus about the dishes
GetDishStatus dish status
GetDishStatus the dish status
GetDishStatus what's the status of the dishes


SetDishStatus that its {status}      <—— intent with custom slot
SetDishStatus its {status}
SetDishStatus it is {status}
SetDishStatus the dishes are {status}


AMAZON.HelpIntent help me
AMAZON.HelpIntent how do you work
AMAZON.HelpIntent how it works
```

SetDishStatus that its {status}

```
SetDishStatus that its {status}
      ^                ^        ^
   intent          spoken      slot
                    word       name
```

define interaction model

configure backend

write up publishing information

~~define interaction model~~

configure backend

write up publishing information

configure backend

configure backend

- hook our intents up to code

configure backend

- hook our intents up to code

- define a backend lambda function, or a URL for a non-lambda API

- On demand compute service

- On demand compute service

- Supports python, easy to deploy

- On demand compute service

- Supports python, easy to deploy

- Alexa passes in JSON with contextual information about the request

```python
def handle(event, context):
    if event['request']['type'] == "LaunchRequest":
        return on_launch(event['request'], event['session'])
    elif event['request']['type'] == "IntentRequest":
        return on_intent(event['request'], event['session'])
    elif event['request']['type'] == "SessionEndedRequest":
        return on_session_ended(event['request'], event['session'])
```

```python
def on_intent(intent_request, session):
    """

    Called when the user specifies an intent for this skill
    """

    intent = intent_request['intent']
    user = session['user']['userId']
    intent_name = intent_request['intent']['name']

    # This is basically like the "router" for the various intents
    # that we've built out.
    if intent_name == "GetDishStatus":
        return get_dish_status(intent, user)
    elif intent_name == "SetDishStatus":
        return set_dish_status(intent, user)
    elif intent_name == "AMAZON.HelpIntent":
        return help_response()
```

```python
def set_dish_status(request, user):
    """

    Set the dish status for the user
    """

    try:
        status = request['slots']['status']['value']
    except KeyError:
        return partial_response()

    if status not in CUSTOM_SLOT_WORDS:
        return build_response(
            {},
            build_speechlet_response(
                "Sorry, I don't understand {}. Are your dishes clean or
dirty?".format(status),
                should_end_session=False,
                reprompt="I missed that. Are your dishes clean or dirty?"
            )
        )
```

```python
def set_dish_status(request, user):
    # continued from last slide...

        dish_status = {
          "user": user,
          "status": status,
    }
    table.put_item(Item=dish_status)
    return build_response(
        {},
        build_speechlet_response(
            "Ok, the dishes are {}.".format(status)
        )
```

```python
def get_dish_status(request, user):
    """

    Query the user in DynamoDB and check the dish status.
    """

    # some boring Dynamo connection stuff...
    try:
        status = db_response['Item']['status']
    except KeyError:
        return build_response(
            {},
            build_speechlet_response(
                "My memory is fuzzy, are your dishes clean or dirty?"
            )
        )


    return build_response(
        {},
        build_speechlet_response(
            "The dishes are {}".format(status)
        )
```

```python
def build_speechlet_response(output):
    """

    Places ``output`` text in Alexa JSON to send back to
    Amazon
    """


def help_response():
    """

    Returns the help response, useful if the user does not
    give you proper data
    """
```

~~define interaction model~~

configure backend

write up publishing information

~~define interaction model~~

~~configure backend~~

write up publishing information

write up publishing information

write up publishing information

- Add skill description

write up publishing information

- Add skill description

- Set example phrases (that match up with your sample utterances!)

write up publishing information

- Add skill description

- Set example phrases (that match up with your sample utterances!)

- Upload an icon for the skill store

~~define interaction model~~

~~configure backend~~

~~write up publishing information~~

that's it!

your app is now live
on your echo

The Dishwasher

Chris Becker

★★★★☆ 3

Disable Skill

"Alexa, ask the dishwasher about the dishes"

"Alexa, tell the dishwasher that the dishes are dirty"

"Alexa, tell the dishwasher the dishes are clean"

About this Skill

Description

Aren't sure if the dishes in your dishwasher are clean or dirty? Ask Alexa! She'll remember the status of your dishes, so you can ask her next time you open up the dishwasher.

thanks

questions?

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