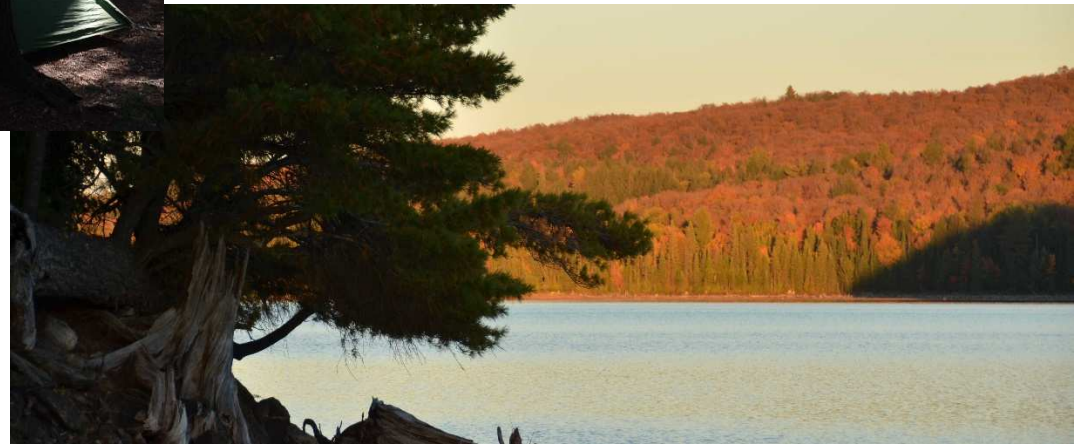


# IBM Watson - Camping in Ontario Parks

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## Members

Jing (Angela) Huang

Mebs Haji

**Rakesh Dhote**

Renita Sudirga

# Motivation and Objective

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## Motivation:

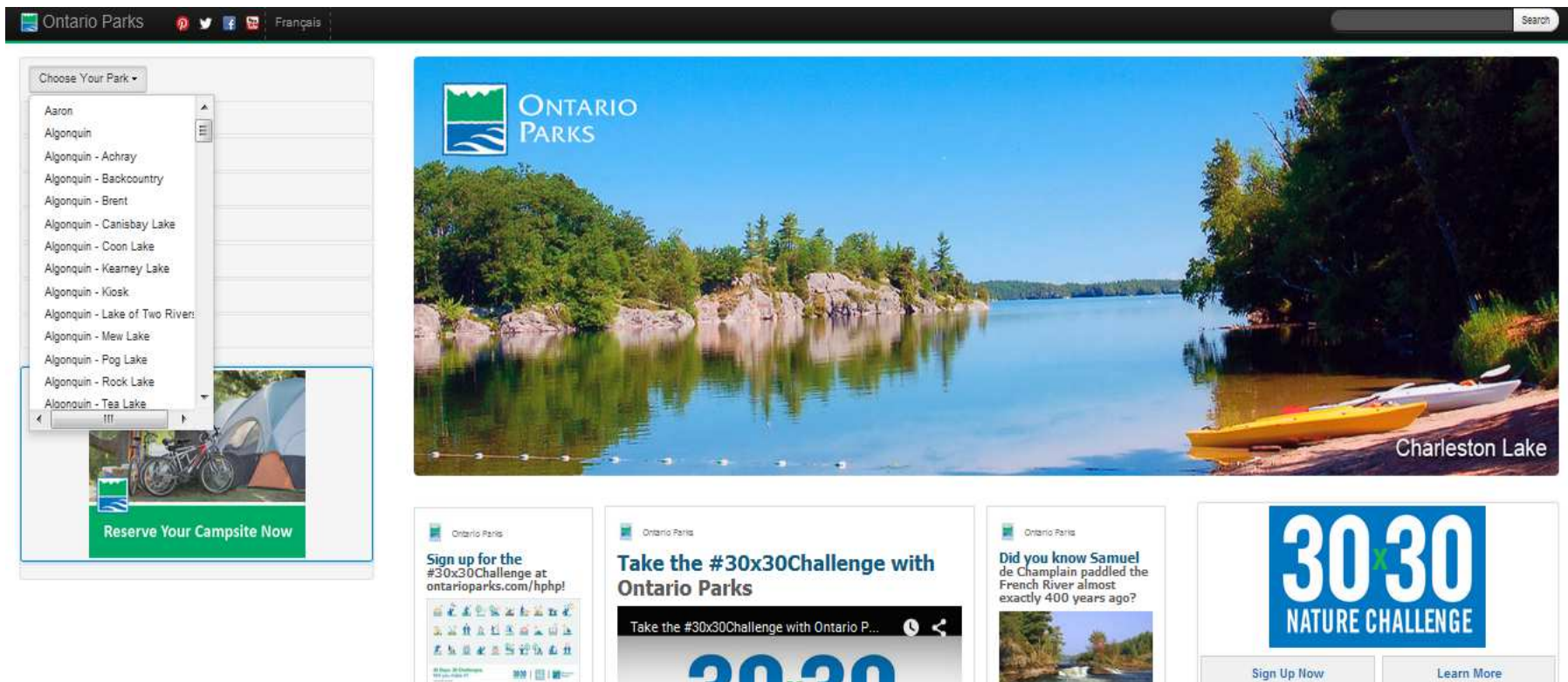
- Camping industry - **\$4.7 billion** to Canada's GDP
- More than 5 million Ontarions camped in 2014
- **125** parks, **1,144** campgrounds in Ontario
- ..... mining camping information - time consuming

## Objective:

Leverage IBM Watson's capabilities to mine the camping information

# Resources

Ontario Parks website: [www.ontarioparks.com](http://www.ontarioparks.com)



126 Ontario parks  
# documents: **25**  
**340** QA pairs to train Watson

# Sample Park Information

[Introduction](#) [Camping](#) [Things to Do](#) [Amenities](#) [Maps](#) [Alerts](#)

## Camping

Located in the picturesque City of Kawartha Lakes, Balsam Lake is an all season recreational park along the Trent-Severn waterway. Campsites are available for all types of camping equipment. For those looking for a little more comfort, the park offers a four bedroom fully serviced cottage. In summer, swim at a clean, safe beach, hike the trails, fish for bass, canoe, paddle boat and kayak. Come in the spring for wildflowers and in the fall for autumn glory.

### Camping Experiences

- [Car Camping](#)
- [Radio-Free Camping](#)
- [Dog-Free Camping](#)
- [Group Camping](#)
- [Walk-in Campsites](#)
- [Cottages](#)

### By the Numbers

- Total Campsites - 506
- Electrical Campsites - 213
- Group Campsites - 3
- Cottages - 1

### Car Camping

Balsam Lake has a range of campsites with and without electricity for tents and RVs. For a private, natural experience car access walk-in sites are also available. Campsites may be reserved from the second Friday in May through to the Thanksgiving weekend. Reservations are accepted five months in advance of arrival – reserve early to avoid disappointment.

### Radio-Free Camping

Eco (walk-in) sites, Cedar Grove, Mapleview and Hawthorne Valley campgrounds are now radio-free.

### Dog-Free Camping

# Resources not considered

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- Camping in Ontario: <http://www.campinginontario.ca/>
- KOA campgrounds in Ontario: <http://koa.com/states-provinces/ontario/>
- Regional tourism websites (listing privately owned campgrounds or RV parks), for example:
- Muskoka camping and RV parks:  
<http://www.discovermuskoka.ca/where-to-stay2/campgroundsrvs-trailer-parks.html>
- Bruce Peninsula tourism:  
<http://www.thebrucepeninsula.com/camping.html>



# Workload distribution

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**Rakesh:** Python script, 15 parks, 60 QA pairs,  
15 test questions

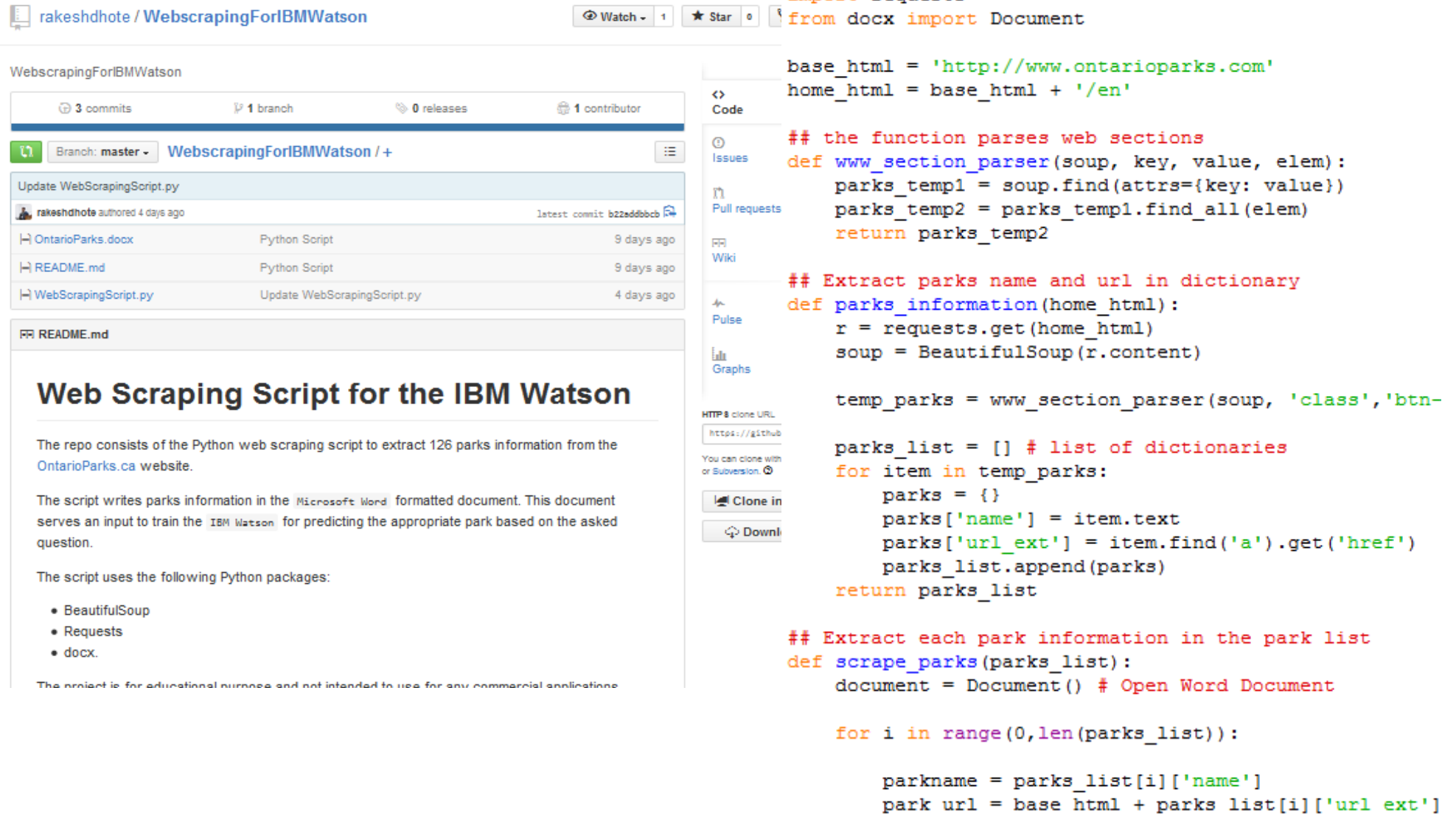
**Meb:** 5 park documents, 16 parks,  
50 QA pairs, 11 test questions

**Renita:** 5 park documents, 150 QA pairs,  
20 test questions

**Angela:** 4 park documents, 80 QA pairs

# Web Scrapping – Python script

**Github:** <https://github.com/rakeshdhote/WebscrappingForIBMWatson.git>



WebscrappingForIBMWatson

3 commits 1 branch 0 releases 1 contributor

Branch: master WebscrappingForIBMWatson / +

Update WebScrapingScript.py

rakeshdhote authored 4 days ago latest commit b22eddbbcb

File	Type	Time
OntarioParks.docx	Python Script	9 days ago
README.md	Python Script	9 days ago
WebScrapingScript.py	Update WebScrapingScript.py	4 days ago

README.md

## Web Scrapping Script for the IBM Watson

The repo consists of the Python web scraping script to extract 126 parks information from the [OntarioParks.ca](http://OntarioParks.ca) website.

The script writes parks information in the [Microsoft Word](http://Microsoft Word) formatted document. This document serves an input to train the [IBM Watson](http://IBM Watson) for predicting the appropriate park based on the asked question.

The script uses the following Python packages:

- BeautifulSoup
- Requests
- docx.

The project is for educational purpose and not intended to use for any commercial applications

```
from bs4 import BeautifulSoup
import requests
from docx import Document

base_html = 'http://www.ontarioparks.com'
home_html = base_html + '/en'

## the function parses web sections
def www_section_parser(soup, key, value, elem):
    parks_temp1 = soup.find(attrs={key: value})
    parks_temp2 = parks_temp1.find_all(elem)
    return parks_temp2

## Extract parks name and url in dictionary
def parks_information(home_html):
    r = requests.get(home_html)
    soup = BeautifulSoup(r.content)

    temp_parks = www_section_parser(soup, 'class', 'btn-

parks_list = [] # list of dictionaries
for item in temp_parks:
    parks = {}
    parks['name'] = item.text
    parks['url_ext'] = item.find('a').get('href')
    parks_list.append(parks)
return parks_list

## Extract each park information in the park list
def scrape_parks(parks_list):
    document = Document() # Open Word Document

    for i in range(0, len(parks_list)):

        parkname = parks_list[i]['name']
        park_url = base_html + parks_list[i]['url_ext']
```

# Training - QA

The screenshot displays the IBM Watson Experience Manager interface for a project named "Canadian-Tourism-2015". The top navigation bar includes the project name, a progress bar at 100%, and user information for "rye\_approver". A summary bar shows statistics: Total Added: 6488, Need Review: 1, Approved: 6402, Goal: 1000.

The main interface has a sidebar with "Expert Training" and "Enter a Question" (selected). The "Enter a Question" section contains a text input field with the placeholder "Enter your question here" and an "Add Question" button.

Below this, a search and filter section shows a "Question:" field with the text "arrowhead" and a "Go" button. A "Tags:" field with a placeholder "Enter tags to filter by tags. Separate multiple tags with commas." and a dropdown menu set to "All questions" are also present. A checkbox for "Owned by me" is visible.

The search results section displays a single result titled "How to reserve a deluxe yurt in Arrowhead park?". The result includes a "Mark as ..." button and a set of action buttons: "Assign To", "Add Comments", "Reject", "Edit", and "Delete". Below the buttons, the text "Tags:" is followed by a link "Open Source Document".

The main content area of the result shows the title "Soft Sided Shelters in Arrowhead" and a detailed paragraph describing the amenities and reservation process for the deluxe tent and yurt. The paragraph mentions features like rustic log furniture, queen beds, a kitchenette with a mini fridge and coffee maker, a gas barbeque, and a propane barbeque. It also details the number of people it sleeps (maximum 5) and provides instructions on what to bring, restrictions, and how to reserve.

At the bottom right of the result, it says "Showing 26 of 26 filtered results."



# Training – QA cont...

IBM Watson Experience Manager | Project: Canadian-Tourism-2015 | Projects | rye\_approver | IBM

Total Added: 6488 | Need Review: 1 | Approved: 6402 | Goal: 1000 | Progress: 100%

Expert Training | **Enter a Question** | Export Questions

Enter your question here | Add Question

Question: Enter question text to filter by question. | Go

Tags: Enter tags to filter by tags. Separate multiple tags with commas. | All questions | ☐ Owned by me

**Is there hunting at Wabakimi Park?** | Mark as ...

Assign To | Add Comments | Reject | Edit | Delete

Tags:

This question is mapped to 'Can I hunt at Wabakimi Park?' | [Open Source Document](#)

**Hunting**

Hunting is permitted in the expanded park area for moose and is guided by tourist outfitters who can help you organize the trip of a lifetime. Hunting in the park is subject to Ontario Hunting Regulations.

Wakami Lake Provincial Park (Ontario).

➤ There are 2 questions in this cluster with the same answer.

Showing 100 of 6488 results. [Show more.](#)

# Testing

- 45 questions for testing
- Metrics: Confidence and relevance scores

Sample Test Questions	Confidence Score	Relevance Score (0/1)
What are camping facilities at Restoule?	6%	1
What amenities are available at Restoule?	30%	1
What amenities are available at Rock Point?	53%	1
How many bird species are found at Rock Point?	4%	1
Which park attracts birdwatchers for the Festival of Flight?	80%	1
How many bird species are recorded in the Rondeau?	33%	1
Is fishing license required at the Rushing River?	0%	0
What amenities are available at Rushing River?	0%	0
How many campground are available in Nagagamisis?	100%	1
How many campsites are available at the Neys?	0%	0
What is the the site of a 1946 crash landing of a Gloster Meteor?	43%	1
Which year did Gloster Meteor crashed in Helenbar lake?	14%	1
What amenities are available at Mono Cliffs?	21%	1
Are flush toilets available at the Mono Cliff?	3%	1
*****	*****	*****
<b>Final Performance</b>	<b>40%</b>	<b>62%</b>

# Watson Experience

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- (+) Once trained, Watson can recognize abbreviations, synonyms
- (+) Watson returns answers quite fast
- (-) Watson could not take into account third-level subheading information
- (-) Sensitive to typos, special characters (e.g., “,/)
- (-) Training is a cumbersome task. A lot of time generating, formatting documents.

**Thank You !**