

Introduction:

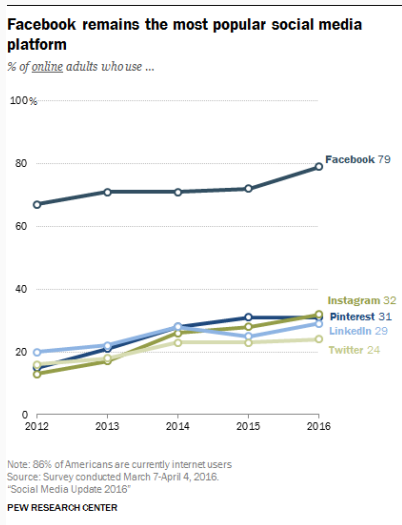
## Demographic estimates from the Facebook Marketing API

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Connor Gilroy

2017-10-16

Facebook is the social network par excellence. As of 2016, **79%** of US internet users are on Facebook.



Facebook Ads are a locus of concern about discrimination, about “fake news”, and so on.

## *Facebook, After ‘Fail’ Over Ads Targeting Racists, Makes Changes*

By SAPNA MAHESHWARI and MIKE ISAAC SEPT. 20, 2017



Sheryl Sandberg, Facebook's chief operating officer, said the company had never anticipated that its ad-targeting technology could be used to court users who described themselves as “Jew haters” or used other hate speech. Laurent Gillieron/Keystone, via Associated Press

### RELATED COVERAGE



How Facebook Is Changing Your Internet  
SEPT. 17, 2017



Google and Facebook Face Criticism for Ads Targeting Racist Sentiments  
SEPT. 15, 2017

Using Facebook Ads is cutting edge:

- Emilio's paper with Ingmar Weber and Krishna Gummadi using it to study stocks of international migrants just came out this month. (paper, news)
- J. Nathan Matias and others did an audit this summer of who had access to the 'Pride' reaction. (article, GitHub)

# The Ads Manager

The ability to target ads by demographics and interests is at the core of both the potential of and the concerns about Facebook Ads.

Locations ⓘ ☐ Use your Facebook Page location to reach people near your business

Everyone in this location ▼

United States

📍 United States

📍 Include ▼ | Type to add more locations | Browse

Add Bulk Locations...

Age ⓘ 20 ▼ - 20 ▼

Gender ⓘ All **Men** Women

Languages ⓘ

Detailed Targeting ⓘ INCLUDE people who match at least ONE of the following ⓘ


Demographics > Relationship > Interested In

Men

Add demographics, interests or behaviors | Suggestions | Browse

Exclude People or Narrow Audience

Audience Size



Your audience selection is fairly broad.

Potential Reach: 25,000 people

Estimated Daily Results

Reach

2,000 - 7,700 (of 21,000) ⓘ

The accuracy of estimates is based on factors like past campaign data, the budget you entered and market data. Numbers are provided to give you an idea of performance for your budget, but are only estimates and don't guarantee results.

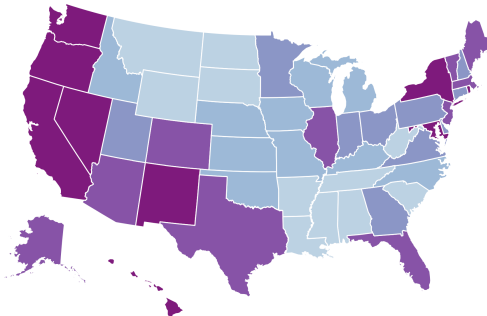
Were these estimates helpful?

## Example: description

Even when large proportions of users don't provide a piece of information, you can still see clear geographic patterns.

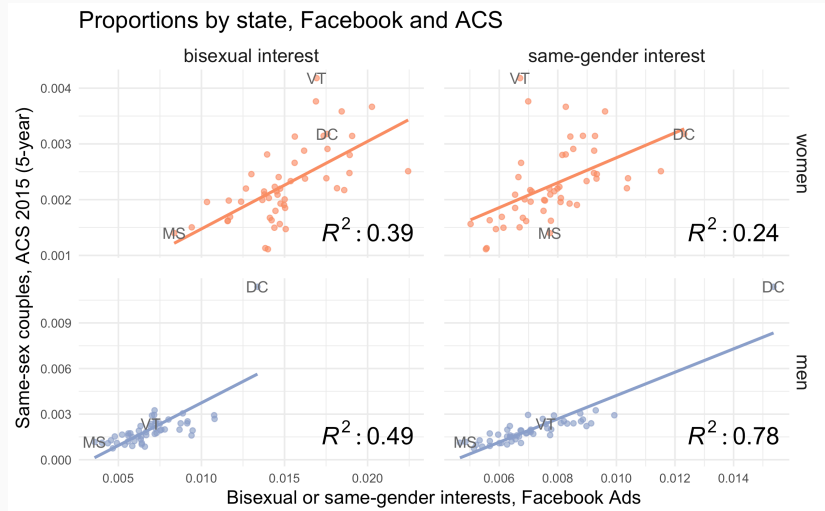
Proportion of Facebook users with bisexual or same-gender interests

0.0127-0.016   0.016-0.0176   0.0176-0.0187   0.0187-0.0212   0.0212-0.0293



## Example: validation

The, it is possible to compare those patterns to existing data sources, which have their own sets of biases and limitations.



### Authentication:

Two components: an *access token* and an *ads account*.

### Requesting information:

You specify the audience you want to reach using a *targeting spec* in a JSON format; you then get an estimate of how many users that specification will reach.



The Marketing API:

<https://developers.facebook.com/docs/marketing-apis>

Access:

<https://developers.facebook.com/docs/marketing-api/access>

Targeting:

[https://developers.facebook.com/docs/marketing-api/  
buying-api/targeting](https://developers.facebook.com/docs/marketing-api/buying-api/targeting)

Matheus Araujo has written `pySocialWatcher`, a Python module for collecting social data from the Marketing API:

<https://github.com/maraujo/pySocialWatcher>

It relies on the `requests` package, Python's version of `httr`.

Facebook also provides a Python SDK for the Marketing API, which is an interface/abstraction to the API:

<https://github.com/facebook/facebook-python-ads-sdk>

**SocialMediaLab** and **Rfacebook** are packages that provide access to public Facebook pages and other aspects of Facebook's Graph API.

To use these, you can generate a standard OAuth access token from your app ID and app secret, much like you would do with Twitter.