



A P G

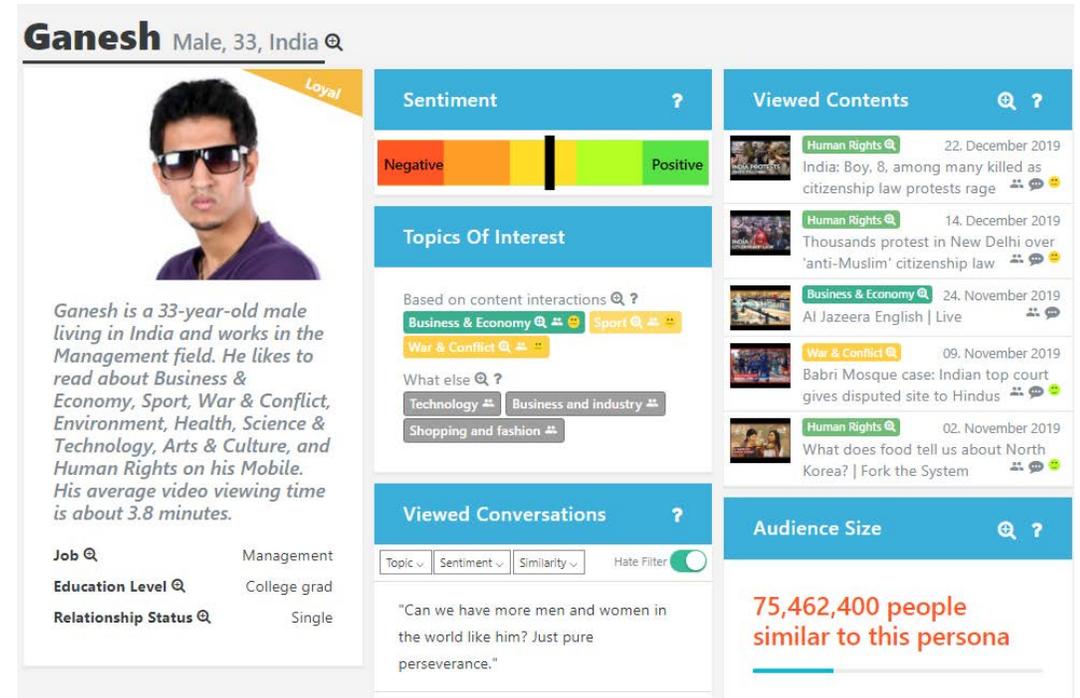
Automatic Persona Generation

Developed in Qatar by

Qatar Computing Research Institute
Hamad Bin Khalifa University

What is a persona?

- A 'persona' is a fictive person describing an important user or customer **group**.
- Personas simplify numerical data into an easily understandable format: another human being
- Personas help communicate numbers in the organization, so that decisions can be made keeping the users or customers in mind.



(A persona generated by APG)

APG - Automatic Persona Generation

Keeping the focus on a person!

James, a 22-year-old single, sales, frequent traveler.

A lot of numbers ...

Video ID	Video	Country	GenderAge	VideoView	6	7	8	9	10	11
1	UFTM16qY	ZSvsSHARL	FK	6	46 /age18-24, /female, 4.2,	/age25-34, /female, 4.2,	/age18-24, /male, 50.0,	/age25-34, /male, 28.2,	/age35-44, /male, 4.2,	/age65+, /male,
2	7x0vMCM8rY	ZSvsSHARL	FR	8	78 /age18-24, /female, 7.5,	/age45-54, /female, 2.5,	/age65+, /female, 2.5,	/age13-17, /male, 5.0,	/age18-24, /male, 47.5,	/age25-34, /male,
3	HKnDVlpTQ	ZSvsSHARL	BE	7	39 /age18-24, /female, 9.1,	/age25-34, /female, 9.1,	/age35-44, /female, 4.5,	/age13-17, /male, 4.5,	/age18-24, /male, 36.4,	/age25-34, /male,
4	-LXH-zB-U	ZSvsSHARL	ID	9	151 /age18-24, /female, 6.8,	/age25-34, /female, 8.5,	/age65+, /female, 1.7,	/age13-17, /male, 8.5,	/age18-24, /male, 30.5,	/age25-34, /male,
5	PTT0DBK0RA	ZSvsSHARL	DK	10	49 /age18-24, /female, 9.4,	/age25-34, /female, 6.3,	/age35-44, /female, 3.1,	/age65+, /female, 3.1,	/age13-17, /male, 6.3,	/age18-24, /male,
6	TzRS8BHY	ZSvsSHARL	DE	10	332 /age18-24, /female, 6.1,	/age25-34, /female, 6.1,	/age35-44, /female, 4.1,	/age45-54, /female, 2.0,	/age65+, /female, 2.0,	/age18-24, /male,
7	uV6L-wrHY	ZSvsSHARL	SE	9	137 /age18-24, /female, 10.3,	/age25-34, /female, 4.4,	/age13-17, /male, 4.4,	/age18-24, /male, 30.9,	/age25-34, /male, 29.4,	/age35-44, /male,
8	uUCFAB_7uc	ZSvsSHARL	NZ	8	54 /age18-24, /female, 21.7,	/age25-34, /female, 4.3,	/age35-44, /female, 4.3,	/age13-17, /male, 13.0,	/age18-24, /male, 13.0,	/age25-34, /male,
9	0_fGag7Gks	ZSvsSHARL	AE	8	101 /age18-24, /female, 2.0,	/age25-34, /female, 4.0,	/age35-44, /female, 4.0,	/age13-17, /male, 8.0,	/age18-24, /male, 32.0,	/age25-34, /male,
10	01pNwM8Kc	ZSvsSHARL	MX	9	138 /age18-24, /female, 7.7,	/age25-34, /female, 3.8,	/age45-54, /female, 1.3,	/age65+, /female, 1.3,	/age13-17, /male, 1.3,	/age18-24, /male,
11	0BYWVz0Mio	ZSvsSHARL	NL	10	141 /age18-24, /female, 3.8,	/age25-34, /female, 3.8,	/age45-54, /female, 1.9,	/age65+, /female, 3.8,	/age13-17, /male, 3.8,	/age18-24, /male,
12	0EJ-8PTWZSY	ZSvsSHARL	IE	9	77 /age18-24, /female, 2.4,	/age25-34, /female, 2.4,	/age45-54, /female, 4.9,	/age13-17, /male, 7.9,	/age18-24, /male, 43.9,	/age25-34, /male,
13	0CDKDTajmM	ZSvsSHARL	NO	6	42 /age18-24, /female, 4.5,	/age25-34, /female, 18.2,	/age13-17, /male, 9.1,	/age18-24, /male, 36.4,	/age25-34, /male, 27.3,	/age35-44, /male,
14	0ISTJN_w09Y	ZSvsSHARL	PH	6	178 /age18-24, /female, 71.4,	/age25-34, /female, 0.9,	/age18-24, /male, 14.3,	/age25-34, /male, 8.0,	/age35-44, /male, 4.5,	/age45-54, /male,
15	0jhd_pkzQo	ZSvsSHARL	IT	5	41 /age13-17, /female, 8.0,	/age18-24, /male, 28.0,	/age25-34, /male, 36.0,	/age35-44, /male, 24.0,	/age45-54, /male, 4.0,	/age65+, /male,
16	0oAKTU0b50	ZSvsSHARL	IN	12	304 /age13-17, /female, 0.5,	/age18-24, /female, 8.4,	/age25-34, /female, 2.6,	/age35-44, /female, 1.1,	/age45-54, /female, 0.5,	/age55-64, /female,
17	0OLSN_gz8g	ZSvsSHARL	CA	12	227 /age13-17, /female, 1.4,	/age18-24, /female, 6.9,	/age25-34, /female, 5.4,	/age35-44, /female, 1.8,	/age45-54, /female, 1.2,	/age55-64, /female,
18	0PCLUhb09	ZSvsSHARL	US	12	4272 /age13-17, /female, 0.9,	/age18-24, /female, 6.9,	/age25-34, /female, 4.6,	/age35-44, /female, 1.5,	/age45-54, /female, 0.9,	/age55-64, /female,
19	0w-sfbc_rfo	ZSvsSHARL	GB	12	787 /age13-17, /female, 2.8,	/age18-24, /female, 6.8,	/age25-34, /female, 3.8,	/age35-44, /female, 3.5,	/age45-54, /female, 0.5,	/age13-17, /male,
20	0wAccey0	ZSvsSHARL	MY	11	185 /age13-17, /female, 1.0,	/age18-24, /female, 5.9,	/age25-34, /female, 4.9,	/age35-44, /female, 1.0,	/age65+, /female, 1.0,	/age13-17, /male,
21	0ze4AH_SkUw	ZSvsSHARL	SG	9	129 /age13-17, /female, 1.4,	/age18-24, /female, 5.7,	/age25-34, /female, 4.3,	/age35-44, /female, 2.9,	/age13-17, /male, 5.7,	/age18-24, /male,
22	0zz-2kKENDc	ZSvsSHARL	SA	7	102 /age13-17, /female, 2.5,	/age18-24, /female, 5.0,	/age25-34, /female, 5.0,	/age13-17, /male, 22.5,	/age25-34, /male, 50.0,	/age35-44, /male,
23	16wz3CPYnc	ZSvsSHARL	AU	12	269 /age13-17, /female, 0.7,	/age18-24, /female, 4.8,	/age25-34, /female, 3.4,	/age35-44, /female, 2.1,	/age45-54, /female, 1.4,	/age65+, /female,
24	18-jP7W5TSw	ZSvsSHARL	BR	10	61 /age13-17, /female, 2.3,	/age18-24, /female, 2.3,	/age35-44, /female, 4.7,	/age45-54, /female, 23.3,	/age13-17, /male, 2.3,	/age18-24, /male,
25	1at88b_TDX	ZSvsSHARL	ZA	8	29 /age13-17, /female, 9.5,	/age18-24, /female, 14.3,	/age25-34, /female, 4.8,	/age35-44, /female, 4.8,	/age13-17, /male, 9.5,	/age18-24, /male,
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27	1cQNHChvAQ	zy81BvSN8	ES	6	45 /age25-34, /female, 4.8,	/age45-54, /female, 4.8,	/age18-24, /male, 23.8,	/age25-34, /male, 38.5,	/age35-44, /male, 14.3,	/age55-64, /male,
28	1l0p0t58Nc	zy01BvSN8	AE	7	101 /age18-24, /female, 7.7,	/age25-44, /female, 7.7,	/age13-17, /male, 1.9,	/age18-24, /male, 38.5,	/age25-34, /male, 26.9,	/age35-44, /male,

vs.

James Male, 22, United States



James is a 22-year-old male living in United States and works in the Sales field. He likes to read about Human Rights, Politics, Arts & Culture, Sport, War & Conflict, Health, and Environment on his Mobile. His average video viewing time is about 7.2 minutes.

Sentiment
 Negative | Positive

Topics Of Interest
 Based on content interactions
 Human Rights, Politics, Arts & Culture

Viewed Conversations
 "Its fresh air. let your lungs detox."

Viewed Contents
 Business & Economy: Beijing unveils world's largest airport ahead of 70th anniversary
 Environment: Amazon burning: Brazil reports record surge in forest fires
 Human Rights: China steps up threats to Hong Kong protesters
 Science & Technology: Five dead after explosions at two Russia military sites
 War & Conflict: Al Jazeera English | Live

Audience Size
 21,310,490 people similar to this persona

Job: Sales
Education Level: College grad
Relationship Status: Single

"Personas give faces to data."

...and they are a great way to communicate within a team or organization.

Why automate persona generation?

Personas are usually created with manual methods, which are **expensive** and relatively **slow** to implement. Personas created manually can quickly become **outdated**, meaning organizations cannot be certain the personas accurately represent their customer base.

Our solution:

1. Real online analytics data → better personas
2. Faster creation time → better personas
3. Updates each month → better personas

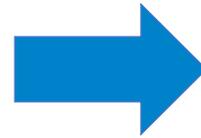
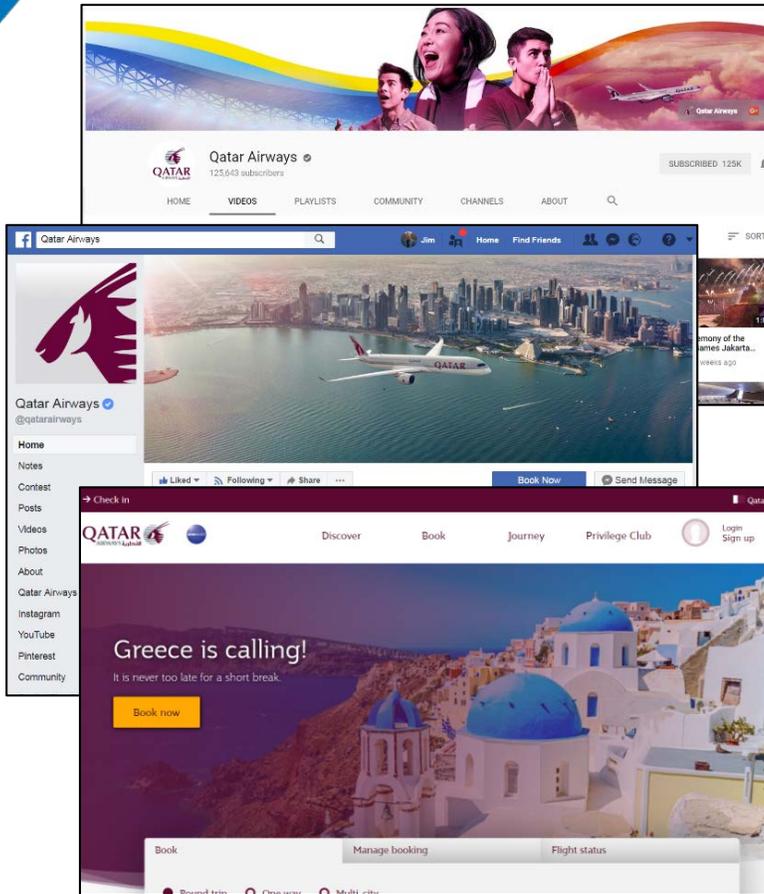


Forrester Research reports productivity improvement using accurate personas

V. L. Drego and M. Dorsey, "The ROI Of Personas," Forrester Research 3 Aug. 2010.

Better personas → better decisions → better business results.

What is APG?

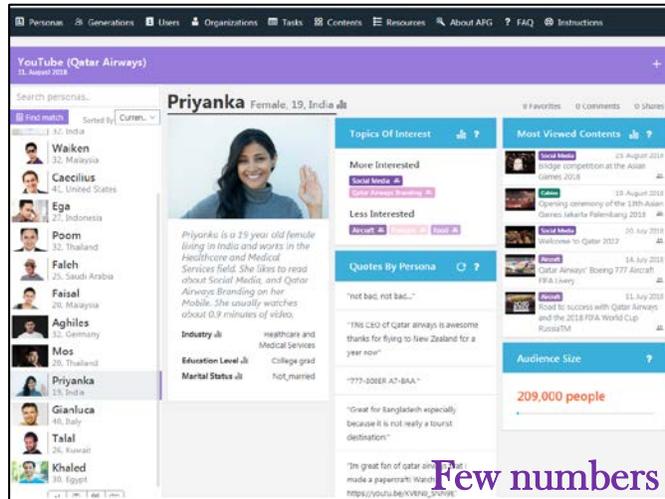


A detailed persona profile for Priyanka, a 22-year-old female from India. The profile includes a profile picture, a bio, and various analytics. The bio states: "Priyanka is a 22-year-old female living in India and works in the Healthcare and Medical Services field. She likes to read about Aircraft, and Qatar Airways Branding on her Mobile. Her average video viewing time is about 1.0 minutes." The profile also shows a sentiment bar (Negative, Positive), topics of interest (Aircraft, Qatar Airways Branding, Entertainment, Shopping and fashion, Technology), viewed contents (Adventure Travel, Social Media), and an audience size of 280,000 people similar to this persona. The profile is titled "Priyanka Female, 22, India" and has an "Occasional" status.

- A system for automatically creating personas from online analytics data
- Proven capability to process hundreds of millions of user interactions from YouTube, Facebook, and Google Analytics. Plus, individual customer data!
- Stable, robust stack using Flask framework, PostgreSQL database, Pandas/scikit-learn libraries.

Why APG?

It's a full stack implementation!



Strategic

- Common focus across business units representing heterogenous datasets.



Operational

- Use to create better content, products or other customer outputs.



Tactical

- Data and numbers available for the 'last mile'.

Abstract with personas to Concrete with numbers all in one system!

Sometimes numbers are good!

	A	E	F	G	H	I	J	K	L	M	N
1	VideoID	Video	Country	GenderAge	VideoView	6	7	8	9	10	11
2	_UbFTMn6qY	Zz9sn5HvRLO	PK	6	46	u'age18-24', u'female', 4.2]	u'age55-64', u'female', 4.2]	u'age18-24', u'male', 50.0]	u'age25-34', u'male', 29.2]	u'age35-44', u'male', 4.2]	u'age65-', u'male', 1.7]
3	_7xObMOMBhY	Zz9sn5HvRLO	FR	8	78	u'age18-24', u'female', 7.5]	u'age45-54', u'female', 2.5]	u'age65-', u'female', 2.5]	u'age13-17', u'male', 5.0]	u'age18-24', u'male', 47.5]	u'age25-34', u'male', 1.7]
4	_HKNOVLpTZQ	Zz9sn5HvRLO	BE	7	39	u'age18-24', u'female', 9.1]	u'age25-34', u'female', 9.1]	u'age35-44', u'female', 4.5]	u'age13-17', u'male', 4.5]	u'age18-24', u'male', 36.4]	u'age25-34', u'male', 1.7]
5	-LXH_-2B-U	Zz9sn5HvRLO	ID	9	154	u'age18-24', u'female', 6.8]	u'age25-34', u'female', 8.5]	u'age65-', u'female', 1.7]	u'age13-17', u'male', 8.5]	u'age18-24', u'male', 30.5]	u'age25-34', u'male', 1.7]
6	_P700DBK0RA	Zz9sn5HvRLO	DK	10	49	u'age18-24', u'female', 9.4]	u'age25-34', u'female', 6.3]	u'age55-64', u'female', 3.1]	u'age65-', u'female', 3.1]	u'age13-17', u'male', 6.3]	u'age18-24', u'male', 1.7]
7	_TJzSR98IHY	Zz9sn5HvRLO	DE	10	332	u'age18-24', u'female', 6.1]	u'age25-34', u'female', 6.1]	u'age35-44', u'female', 4.1]	u'age45-54', u'female', 2.0]	u'age65-', u'female', 2.0]	u'age18-24', u'male', 1.7]
8	_tV6L-wzfHY	Zz9sn5HvRLO	SE	9	137	u'age18-24', u'female', 10.3]	u'age25-34', u'female', 4.4]	u'age13-17', u'male', 4.4]	u'age18-24', u'male', 30.9]	u'age25-34', u'male', 29.4]	u'age35-44', u'male', 1.7]
9	_zUC7A8_7uc	Zz9sn5HvRLO	NZ	8	54	u'age18-24', u'female', 21.7]	u'age25-34', u'female', 4.3]	u'age35-44', u'female', 4.3]	u'age13-17', u'male', 13.0]	u'age18-24', u'male', 13.0]	u'age25-34', u'male', 1.7]
10	0_fgZg7GKbs	Zz9sn5HvRLO	AE	8	101	u'age18-24', u'female', 2.0]	u'age25-34', u'female', 4.0]	u'age35-44', u'female', 4.0]	u'age13-17', u'male', 8.0]	u'age18-24', u'male', 32.0]	u'age25-34', u'male', 1.7]
11	01IpNdWiBk	Zz9sn5HvRLO	MX	9	138	u'age18-24', u'female', 7.7]	u'age25-34', u'female', 3.8]	u'age45-54', u'female', 1.3]	u'age65-', u'female', 1.3]	u'age13-17', u'male', 1.3]	u'age18-24', u'male', 1.7]
12	0BVVW2cIM1o	Zz9sn5HvRLO	NL	10	141	u'age18-24', u'female', 3.8]	u'age25-34', u'female', 3.8]	u'age35-44', u'female', 1.9]	u'age45-54', u'female', 3.8]	u'age65-', u'female', 3.8]	u'age18-24', u'male', 1.7]
13	0EJ-8PTW26Y	Zz9sn5HvRLO	IE	9	77	u'age18-24', u'female', 2.4]	u'age25-34', u'female', 2.4]	u'age45-54', u'female', 4.9]	u'age13-17', u'male', 7.3]	u'age18-24', u'male', 43.9]	u'age25-34', u'male', 1.7]
14	0GDKDTsjghM	Zz9sn5HvRLO	NO	6	42	u'age18-24', u'female', 4.5]	u'age25-34', u'female', 18.2]	u'age13-17', u'male', 9.1]	u'age18-24', u'male', 36.4]	u'age25-34', u'male', 27.3]	u'age35-44', u'male', 1.7]
15	0I5TjN_w09Y	Zz9sn5HvRLO	PH	6	178	u'age18-24', u'female', 71.4]	u'age25-34', u'female', 0.9]	u'age18-24', u'male', 14.3]	u'age25-34', u'male', 8.0]	u'age35-44', u'male', 4.5]	u'age45-54', u'male', 1.7]
16	0jhJD_pkqQo	Zz9sn5HvRLO	IT	5	41	u'age13-17', u'female', 8.0]	u'age18-24', u'male', 28.0]	u'age25-34', u'male', 36.0]	u'age35-44', u'male', 24.0]	u'age45-54', u'male', 4.0]	
17	0oAJKTUhb50	Zz9sn5HvRLO	IN	12	304	u'age13-17', u'female', 0.5]	u'age18-24', u'female', 8.4]	u'age25-34', u'female', 2.6]	u'age35-44', u'female', 1.1]	u'age45-54', u'female', 0.5]	u'age55-64', u'female', 1.7]
18	0OLS_N_gzBgl	Zz9sn5HvRLO	CA	12	2227	u'age13-17', u'female', 1.4]	u'age18-24', u'female', 6.9]	u'age25-34', u'female', 5.4]	u'age35-44', u'female', 1.8]	u'age45-54', u'female', 1.2]	u'age55-64', u'female', 1.7]
19	0PCLHxvbf9I	Zz9sn5HvRLO	US	12	4272	u'age13-17', u'female', 0.9]	u'age18-24', u'female', 6.9]	u'age25-34', u'female', 4.6]	u'age35-44', u'female', 1.5]	u'age45-54', u'female', 0.9]	u'age55-64', u'female', 1.7]
20	0w-oFbq_rfo	Zz9sn5HvRLO	GB	12	787	u'age13-17', u'female', 2.8]	u'age18-24', u'female', 6.8]	u'age25-34', u'female', 3.8]	u'age35-44', u'female', 3.5]	u'age45-54', u'female', 0.5]	u'age13-17', u'male', 1.7]
21	0xQAcqyij0	Zz9sn5HvRLO	MY	11	185	u'age13-17', u'female', 1.0]	u'age18-24', u'female', 5.9]	u'age25-34', u'female', 4.9]	u'age35-44', u'female', 1.0]	u'age65-', u'female', 1.0]	u'age13-17', u'male', 1.7]
22	0ze4AH_5kIw	Zz9sn5HvRLO	SG	9	129	u'age13-17', u'female', 1.4]	u'age18-24', u'female', 5.7]	u'age25-34', u'female', 4.3]	u'age35-44', u'female', 2.9]	u'age13-17', u'male', 5.7]	u'age18-24', u'male', 1.7]
23	0zq-2cKENOc	Zz9sn5HvRLO	SA	7	102	u'age13-17', u'female', 2.5]	u'age18-24', u'female', 5.0]	u'age13-17', u'male', 5.0]	u'age18-24', u'male', 22.5]	u'age25-34', u'male', 50.0]	u'age35-44', u'male', 1.7]
24	16wr2CKPywc	Zz9sn5HvRLO	AU	12	269	u'age13-17', u'female', 0.7]	u'age18-24', u'female', 4.8]	u'age25-34', u'female', 3.4]	u'age35-44', u'female', 2.1]	u'age45-54', u'female', 1.4]	u'age65-', u'female', 1.7]
25	18-j07WST5w	Zz9sn5HvRLO	BR	10	61	u'age13-17', u'female', 2.3]	u'age18-24', u'female', 2.3]	u'age35-44', u'female', 4.7]	u'age45-54', u'female', 23.3]	u'age13-17', u'male', 2.3]	u'age18-24', u'male', 1.7]
26	1aTt8B-TIXK	Zz9sn5HvRLO	ZA	8	29	u'age13-17', u'female', 9.5]	u'age18-24', u'female', 14.3]	u'age25-34', u'female', 4.8]	u'age35-44', u'female', 4.8]	u'age13-17', u'male', 9.5]	u'age18-24', u'male', 1.7]
27	1cH1j56wbHk	zytB1ihnSN8	PT	7	43	u'age25-34', u'female', 16.0]	u'age65-', u'female', 4.0]	u'age13-17', u'male', 4.0]	u'age18-24', u'male', 20.0]	u'age25-34', u'male', 36.0]	u'age35-44', u'male', 1.7]
28	1cQHCHjqVaQ	zytB1ihnSN8	ES	6	45	u'age25-34', u'female', 4.8]	u'age45-54', u'female', 4.8]	u'age18-24', u'male', 23.8]	u'age25-34', u'male', 38.1]	u'age35-44', u'male', 14.3]	u'age55-64', u'female', 1.7]
29	11OpOzSzKNc	zytB1ihnSN8	AE	7	103	u'age18-24', u'female', 7.7]	u'age35-44', u'female', 7.7]	u'age13-17', u'male', 1.9]	u'age18-24', u'male', 38.5]	u'age25-34', u'male', 26.9]	u'age35-44', u'male', 1.7]

Great thing about APG is that we can provide the numbers used to generate the personas via layers of information levels!

APG Use Cases Objective

- **Brand Discovery:** Uncover how your core customers feel about your product or service and how they rationalize the purchase decision.
- **Channel and Offering Alignment:** Align every piece of offerings and marketing activity to a persona and purchase stage, identifying new channels and needs where opportunities exist.
- **Communication:** Personas are also great for communication among team members and across departments. Personas are **GREAT** for meetings! They keep folks focused on the **BIG** picture.

APG Use Cases by Objective

- **Journey Mapping:** Plot the stages and paths of the persona lifecycle, documenting each persona's unique state of mind, needs and concerns at each stage
- **Marketing:** When you understand where your core customers spend their time online, you are able to focus your marketing spend on these channels.
- **Persona Discovery:** Document the individuals involved in the purchase process in a way that allows decision makers to empathize with them in a consistent way.

APG Use Cases by Objective

- **Reporting and Feedback:** Report and review data and insights to drive strategic decisions, as well as provide information to the organization as a whole.
- **Sales:** Targeted offerings can help you convert more potential customers to subscribers, followers and customers. You can also use persona description to tailor lead generation which is likely to improve your lead quality and satisfaction.

APG Use Cases by Role

- **Content Creators:** Content creators can leverage personas for delivery of content that will be most relevant and useful to their audience. When planning for content, we might ask “Would Bridget understand this?” or “Would Bridget be attracted by this?”
- **Executives:** can keep personas in mind while making strategic decisions. In fact, a persona can become a “silent member in the boardroom”.
- **Experimentation and Optimization:** Carry out well-thought experiments to produce statistically significant business insights and apply the results to optimize performance.

APG Use Cases by Role

- **Product Managers:** can use the information to design a product that meets the needs or desires of core customers, and marketing can use personas to craft messages that resonate.
- **Product Offerings:** Personas can be extremely helpful in product development. With the help of personas, you can more easily build the features that suit your customers' needs. Forrester Research reports a 20% productivity improvement with teams that use personas.
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Many other APG features!

(...we can tailor the system, too)

- ➔ Report printing
- ➔ Sharing of persona
- ➔ Favorite personas
- ➔ Account management
- ➔ SSL certificate
- ➔ Data download
- ➔ Personas generation from prior data
- ➔ Filtering and sorting options
- ➔ More!

... and more to come!

Deployed with:



APG is for you, if you have...

1. ... hundreds or thousands of content pieces (videos / web pages, digital products, etc.) published online or customer data.
2. ... thousands or millions of customers/visitors for that content
3. ... international or otherwise diverse audience that is hard to grasp by looking at analytics.
4. ... if you're not an analytics pro who digs working with numbers or you need to communicate to folks aren't.
5. ... if you're currently talking about 'users' without really knowing who they are or getting bogged down in the details.

If these criteria are met, APG can help!

We summarize customer data into easy format that increases your ability to understand your core audience or customers efficiently.

Collaboration Models

Three Types

- **Research** - use APG and provide data for research; no financial cost
- **Commercial** - use APG and provide payment; data not for research
- **Hybrid** - use APG starting with research model and moving to commercial model

Business Models

Three Types

- **Single Run** – purchase generation of personas for a single run or can repeat at regular intervals; no APG system access
- **Seats** – purchase APG system access; QCRI hosts
- **License** – purchase license for hosting APG in your organization

How to get started?

1. We agree together on the collaboration
2. Provide access to data sources (YouTube, Facebook, or Google Analytics => **it's as easy as adding one email to your list of users**)
3. APG automatically generates the personas within hours, and we'll give you access to the system.

Thank you!

Want to create personas
from your analytics data?

Try APG!



A P G

**"You guys are taking
personas to the next level!"**

-Jonathan Grudin, author of *Personas:
Practice and Theory*