

# BrainJuicer Builds Winning Products and Campaigns with Smart Online Research

## Natural Language Processing (NLP) makes digital avatars ultimate focus group

Richard Shaw, VP and DigiVisionary at BrainJuicer, has a unique perspective on brainstorming. “Our job is to generate new ideas for products and campaigns for clients’ brands. It is my belief that new ideas usually do not come as ‘eureka moments’, but instead by connecting existing ideas in a new way that adds value for consumers. All of the data posted on the Internet by consumers themselves is a good place to start looking for those connections.”

BrainJuicer is a global market research company operating on the premise that people make buying decisions based on emotion rather than logic. In their engagements with some of the world’s most successful enterprises, they have shown that people often reveal their preferences for products and affinity to buy in online dialogue and browsing behavior. And, it’s not just supposition. Considering that consumers do a great deal of research before engaging with sales, what they search for, click on, download, and the topics they pursue on social channels clearly point to their preferences.

## The Problem: Determine consumers’ preferences from online actions and social data

When reflecting on the synergy between concepts as the source for inspired, effective campaigns, Shaw remarks, “Our researchers need to know what content is intriguing our clients’ audiences, filter the content to understand what is most relevant, organize it and discover the connecting ideas.”

Researchers cannot parse and consume all of what BrainJuicer calls “medium data,” or hundreds of thousands of items each day. The task of reading all of the cultural, brand and product information gathered from Web content that interests targeted demographic profiles is a slow, painstaking process. Finding the actionable information in the “noise” and volume of data further compounds the issue.



### Company Profile:

- Market research agency

### NLP Problems:

- Identifying conceptual relationships in online data
- App development on a tight timeline, small budget
- Rapid, accurate retrieval of demographic-specific content

### AlchemyAPIs used:

- Keyword extraction
- Language detection
- Relation extraction

### Volume of content analyzed:

- 5,000 websites/day
- 100s of thousands of items

### Type of data analyzed:

- Web site content

### Result:

- Faster time-to-market for products
- Higher impact advertising and marketing campaigns
- Improved research, because preferences are more naturally identified

## The Solution: “DigiViduals®” scout the Web for content and discussions

BrainJuicer seeks to uncover insights about their clients’ target markets by obtaining visibility into consumer preferences and using that knowledge as a springboard to innovation. But rather than analyzing digital behavior alone, what if they could get that insight by creating digital demographic replications that aggregate consumers’ online behavior to create ideal buyer profiles? Shaw did just that. The result is what BrainJuicer calls a “DigiVidual®.”

DigiViduals® are avatars programmed to mimic the behavior of people in a specific target audience that brand leaders want to better understand. Like “research robots,” DigiViduals® scan assigned websites and social channels for content and conversations that their designated consumer personality finds interesting. They engage with the same content that consumers with identical profiles click on, download and share.

Every day 50 DigiViduals® visit thousands of social and enterprise sites and return what they find to BrainJuicer. That is when AlchemyAPI’s deep learning systems begin their work. Shaw uses AlchemyAPI’s Keyword Extraction API to enrich and organize the normalized data (social posts and nested, hierarchical digital documents) for document database storage. Then, BrainJuicer’s innovation and qualitative strategy team, Juice Generation, efficiently retrieves relevant content and reveals patterns. The process includes calling the Language Detection API to further refine a DigiVidual’s® personality through unsupervised learning and understand the cultural context of comments and posts.

Perhaps the most useful service for BrainJuicer is the Relation Extraction API. This makes “connections” between ideas floating through various media channels and the documents in the database to show relationships between the concepts contained within all that unstructured data.

## AlchemyAPI’s Value: Fastest to implement and incredibly reliable

Shaw says that when he took over DigiVidual® development, his two biggest obstacles were a tight timeline and money. He needed to get a system up and running in a couple of months on almost no budget.

As the lone developer, his best option was to evaluate natural language processing solutions offered in the cloud. “I tried a few APIs and found AlchemyAPI’s services to be the fastest to implement and easiest to use. And, the documentation they provide is extremely user-friendly.”

*“I tried a few APIs and found AlchemyAPI’s services to be the fastest to implement and easiest to use. AlchemyAPI’s services have been incredibly reliable and quick.”*

*Richard Shaw  
VP and DigiVisionary  
BrainJuicer*

“AlchemyAPI’s services have been incredibly reliable with quick response times. I don’t worry about system administration or database maintenance, and being able to work with a cloud service that allows for monthly payment softens the financial impact. That’s one of the best things about AlchemyAPI. Someone like me, who has a great concept but not millions of dollars or a team of developers, can realize their idea.”

Surveys and focus groups are time-tested innovation practices. However, focus groups are time-consuming, expensive and measure only a fraction of a given demographic. Surveys can only be programmed to ask the questions researchers think to ask, and consumers can be woefully unreliable witnesses to their own behaviors. With AlchemyAPI’s REST APIs doing the heavy lifting, BrainJuicer’s Juice Generation team has more natural insight into unmet consumer needs, which can inspire their clients’ new product development initiatives and take the guesswork out of communication campaign strategies. The volume of content is no longer a problem. In fact, the more content the DigiVidual® “bot” generates for the team to analyze, the better.

Shaw’s next step will be to enhance DigiViduals® with AlchemyVision, enabling BrainJuicer to associate keywords with the images posted on sites such as Instagram and Pinterest. “That won’t take us very long to implement, since it is identical to AlchemyAPI’s other end points,” he says.

As for the overall results? “We have run DigiViduals® for a couple of years now,” Shaw explains, “Our clients are pleased. It is a great way to bring new ideas to life and it has shortened the time it takes for ideas to go from concept to production and release. In pre-market testing, we have noticed that ideas coming from DigiViduals® outperform ideas coming from other approaches like focus groups and brainstorming.”

## Conclusion

Are digital avatars the ultimate focus group? When it comes to developing new ideas, BrainJuicer thinks so. But highly accurate, multilingual keyword and relational analysis will be required to generate valuable data, the kind of data that BrainJuicer uses to make those “eureka moments” more common than ever before.

With AlchemyAPI’s straightforward implementation and economic, scalable services, visionaries like Richard Shaw explore new technologies that make a big impact with little risk to their time and financial resources.

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## About AlchemyAPI

AlchemyAPI's mission is to power a new generation of smart applications that understand human language and vision by democratizing breakthroughs in deep learning-based artificial intelligence. Our easy-to-use, high-performance cloud services for real time text analysis and computer vision give companies the intelligence needed to transform vast amounts of unstructured data into actions that drive their business.

AlchemyLanguage™ is the world's most popular natural language processing service; AlchemyVision™ is the world's first computer vision service for understanding complex scenes. AlchemyAPI is used by more than 40,000 developers across 36 countries and a wide variety of industries to process over 3 billion texts and images every month.

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To learn more about our company and services, please call us at 1-877-253-0308 or email [info@alchemyapi.com](mailto:info@alchemyapi.com).

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