ABInBev

GROWTH ANALYTICS CENTER

GAC Hackathon
Virtual Pre-Meetup

1 February 2017

Agenda

- Welcome from ABinBev
- Schedule
- Prizes
- Judges
- The Challenge
- The Data
- Judging Criteria
- Rules
- Hackathon.io
- Q&A

Welcome from ABInBev

Felipe Aragao
Global Growth Analytics Head
Anheuser-Busch InBev

Tina Wung
Global Director, Innovation Community
Anheuser-Busch InBev

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Hackathon Schedule

Friday

6:00PM: Doors Open, Registration

7:00PM: Opening Ceremony

8:00PM: Hacking Begins / Release the Datasets! / Dinner

10:00PM: Breakout Tech Sessions

12:00AM: Midnight Snack

Saturday

Hack through the night!

8:00AM: Breakfast

12:00PM: Lunch

4:00PM: Pitch Workshop

6:00PM: Dinner

12:00AM: Midnight Snack

Sunday

8:00AM: Breakfast

9:00AM: Submission Deadline

10:00AM: Judging Begins

11:30 AM: Judge Deliberations

12:00PM: Lunch / Snacks

12:30PM: Awards / Closing Ceremony

1:00PM Happy Hour (21+ only)

Prizes

Grand Prize:

- **Expenses-paid trip to New York City for the winning team to present to ABInBev leadership!**
- Guaranteed in-person interviews for each member of your team with the GAC leadership team for potential job and/or investment opportunities

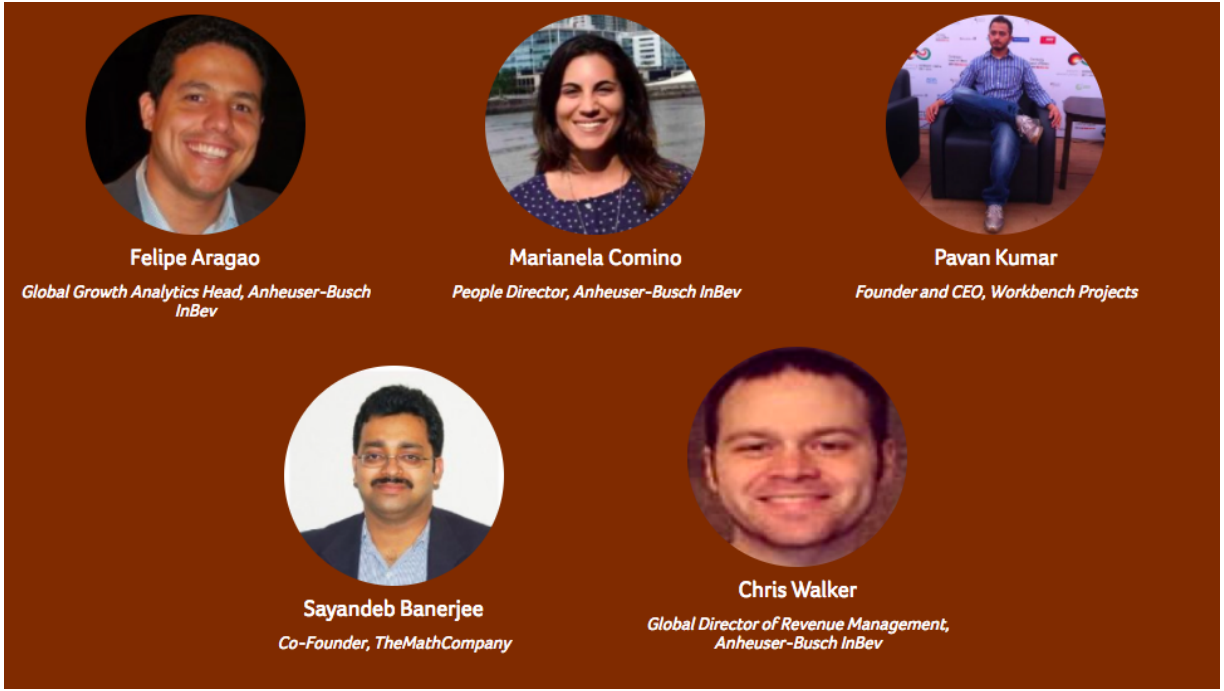
2nd Place

- Guaranteed in-person interviews for each member of your team with the GAC leadership team for potential job and/or investment opportunities
- PS4 (Playstation) for each team member

3rd Place

- Guaranteed in-person interviews for each member of your team with the GAC leadership team for potential job and/or investment opportunities
- iPad Air for each team member

Judges


Felipe Aragao
Global Growth Analytics Head, Anheuser-Busch InBev
Marianela Comino
People Director, Anheuser-Busch InBev
Pavan Kumar
Founder and CEO, Workbench Projects
Sayandeb Banerjee
Co-Founder, TheMathCompany
Chris Walker
Global Director of Revenue Management, Anheuser-Busch InBev

Anheuser-Busch InBev is looking for solutions that help optimize our retail investment.

OVERALL HACKATHON CHALLENGE:

RETAIL OPTIMIZATION BRIEF

- In your local liquor stores or supermarkets, in the beer aisle you see rows upon rows of beer stacked into perfect displays
- These displays have many price promotions and marketing messages to encourage consumers to purchase ABInBev products!
- ABI invests a lot of money for retail promotions to get optimal shelf space, displays, price promotions, and featured placements
- Our goal is to increase consumer willingness to pay, resulting in improved market share and revenue.

In this hackathon, we will focus on 3 key areas of retail optimization.

- Focus Area 1: **Image Processing**
- Focus Area 2: **Driver Analysis**
- Focus Area 3: **Data Visualization**

Focus Area 1: Image Processing

PROBLEM BRIEF

- ABI recommends retailers to sell our products at specific prices
- But retailers can deviate from the recommended prices which can reduce ABI product sales
  - Due to retailers' different pricing strategy or manual errors
- ABI must check retailer compliance
- Now collects store shelf images with price tags weekly

CHALLENGE

Participants must develop an algorithm to extract the weekly price of every SKU from these shelf images. The algorithm should identify the products and weeks where there is discrepancy in the price or erroneous product labeling.

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Focus Area 1: Image Processing

EXPECTED OUTCOME

- Extract and store weekly price of every SKU (stock keeping unit) on the shelf
- List of SKUs along with weeks where price is different from recommended price
- List of SKUs along with weeks where price tags are placed erroneously

AVAILABLE DATA

- Shelf images of products at retail in help showcase the real life scenarios for 104 weeks
- ABI recommended SKY price list for 104 weeks

Image Processing Sample Data: Shelf Set Image

Image Processing Sample Data: Price Tags

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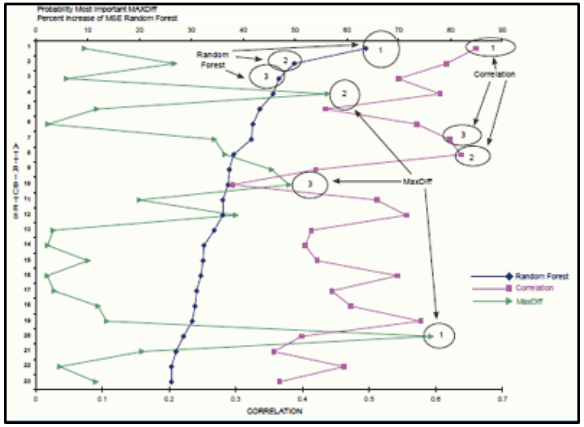
Focus Area 2: Driver Analysis

PROBLEM BRIEF

- It's very complex to identify the specific factors that truly drive incremental volume, market share, and revenue growth.
- ABI needs better insights to understand which promotional levers provide the best return on investment.



CHALLENGE

Participants must develop a driver model that quantifies impact of key drivers on sales, share or volume.

Focus Area 2: Driver Analysis

EXPECTED OUTCOME

- Capture impact of changes in price over sales across time
- Data modeling to quantify performance drivers for sales, share, or volume lift
- Build a tool or interface to support data visualization for better understanding of key insights

AVAILABLE DATA

- Weekly product level sales data for whole beer category in a single market for 4 years
- Datasets in excel or csv form that will contain a variety of internal & external variables. These will include CPI, GDP growth, product distribution, weather, price and more as well as sales volumes/units

Driver Analysis Sample Data:
Internal (Retail) and External Factors data

Date	BRAND	Package Value	BREWER	Segment Value	AB Segment Value	AB Sub-segment Value	AB Mega-segment Value	Distribution (%)	Price per Unit	Price per Volume	Unit Sales	Volume Sales
1/6/2013	BRAND130	6-PACK 11.2-13 OZ GLASS	ABI	CRAFT/IMPORT	HE BEER	IMPORT	ABOVE CORE	36.9%	$ 10.1	$ 43.1	1,817	424
1/13/2013	BRAND130	6-PACK 11.2-13 OZ GLASS	ABI	CRAFT/IMPORT	HE BEER	IMPORT	ABOVE CORE	37.8%	$ 10.4	$ 44.4	1,726	403
1/20/2013	BRAND130	6-PACK 11.2-13 OZ GLASS	ABI	CRAFT/IMPORT	HE BEER	IMPORT	ABOVE CORE	38.4%	$ 10.1	$ 43.2	2,088	487
1/27/2013	BRAND130	6-PACK 11.2-13 OZ GLASS	ABI	CRAFT/IMPORT	HE BEER	IMPORT	ABOVE CORE	38.9%	$ 10.0	$ 42.9	2,048	478
2/3/2013	BRAND130	6-PACK 11.2-13 OZ GLASS	ABI	CRAFT/IMPORT	HE BEER	IMPORT	ABOVE CORE	40.3%	$ 10.0	$ 42.7	2,231	520

Date	Mean Temperature (C)	Max Temperature	Min Temperature	Occupancy (%)	Per Capita Personal Income (Annual)	Labor Force	Employment	Unemployment	Unemp. Rate	...
1/6/2013	12	17	7	69.6%	$ 47,580	4,945,000	4,439,700	505,300	10.2%	...
1/13/2013	13	20	5	69.6%	$ 47,580	4,945,000	4,439,700	505,300	10.2%	...
1/20/2013	18	24	11	69.6%	$ 47,580	4,945,000	4,439,700	505,300	10.2%	...
1/27/2013	14	19	8	69.6%	$ 47,580	4,945,000	4,439,700	505,300	10.2%	...
2/3/2013	13	18	9	75.3%	$ 47,580	4,948,900	4,446,700	502,200	10.1%	...

Focus Area 3: Data Visualization

PROBLEM BRIEF

- ABI has a significant amount of data in formats that are not easily readable or digestible for the end user.
- ABI's raw data is necessarily for analytics, but the insights that the data uncovers is much more important.
- ABI must use the insights from the data to make better decisions on how to invest our money in retail promotions.

CHALLENGE

Participants can enhance their driver analysis solution's desirability by supporting it with a tool or interface which will help business users leverage insights from the data model. Participants must develop an elegant data visualization solution in order to extract the retail insights that will allow us to implement better retail promotion strategy and tactical activation.

Focus Area 3: Data Visualization

EXPECTED OUTCOME

- *Scenario planner:* A 'What-If-Analysis' tool which will help business users determine promotional prices and display & feature ads for products to optimize sales in future

- *Business Intelligence tool:* An executive dashboard which will showcase relationship between sales and key performance indicators. The flow of the tool should be intuitive and in a self-servicing format

SUGGESTIONS FOR SUCCESS

- Include graphs for representing key business insights
- Support dynamic and interactive graphs which can take user inputs (eg D3.js, PykCharts.js, etc.)
- Open Source platforms which are scalable to support implementation in business environment

AVAILABLE DATA

- Same data as provided for Focus Area 1 – Driver Analysis

Judging Criteria

1. **40% for technical execution and approach**
   - *Robustness of algorithm*
   - *Coding best practices*

2. **30% for the desirability and feasibility**
   - *Desirability – will the end users want to use it? Feasibility – is this solution something that the end users can implement at scale?*

3. **30% for innovation and uniqueness**

Rules

1. Max Team Size = 5
2. Submissions due on Hackathon.io @ 9am Sunday, February 5
3. 2 minutes to Demo, 1 minute for Judge Q&A
4. Participation Agreement
5. Fresh Code
6. Code of Conduct
7. Travel Stipends
8. Registration & Check-In – Arrive Early!

Hackathon.io

1. Go to: http://www.hackathon.io/abinbev-hacktheworld-bangalore/
2. Click on “Join Event”
3. Click on “Projects”
4. Click on “List Your Project”
5. Click “Proceed”
6. Check ”Projects” to confirm you’re listed!

Q&A