RESO®

2017 Fall Conference

How can brokers expand and grow the business using Cognitive Insights & AI?

Building on previous work

- Real Estate Big Data & Insights Maturity Model

- Longitudinal Property Records ™

- Real Estate Ontology used for Price Predictions

- Cognitive Engine for Real Estate

Cognitive Insights for the Broker Community

- Broker Insights
  - Deep Learning based Recommendations
  - New Strategies, New Markets, Agents to Recruit, Revenue Forecasts

- Image Recognition
  - Extracting RESO standard data
  - Enabling New Applications

- Data Quality
  - The foundation for better insights

Broker Insights

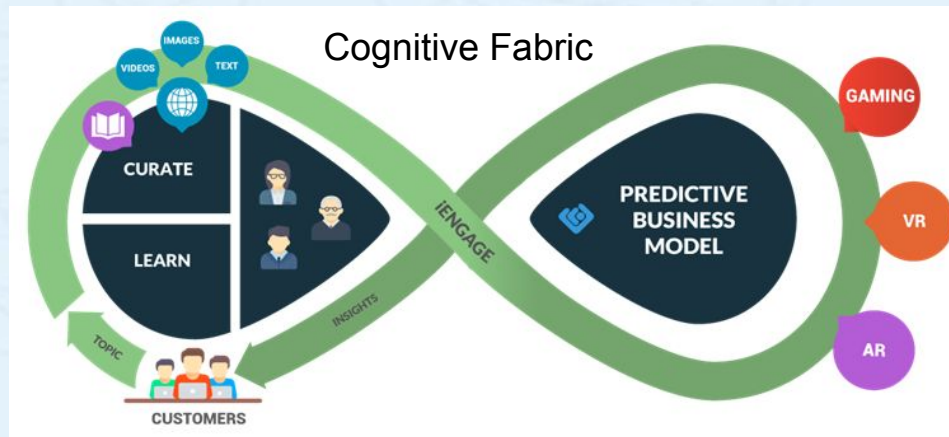Historical Transaction Data

Current Inventory Data

Market Data
- Employment
- Development
- New
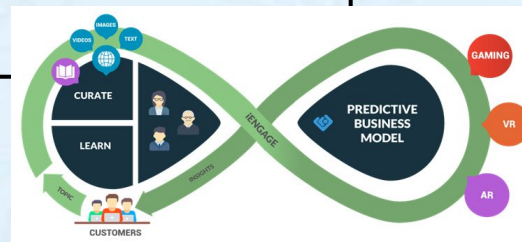- . . .

Broker Dashboard

Recommendations
- New Strategies
- New Markets
- Agents to Recruit

Revenue Forecasts

Cognitive Fabric

New Markets & Strategies

- Annual inventory trend cycles for combinations of:
  - Property Type
  - Price band
  - Geography
- Long term inventory trends for the same criteria
- Employment trends and news
- Development trends and news

Predictions

- Current Market: Growing Segments in the current markets
- Current Market: Price movement predictions - List/Sold
- New Markets: Inventory & Price predictions
- New Markets: Tx Volume Predictions
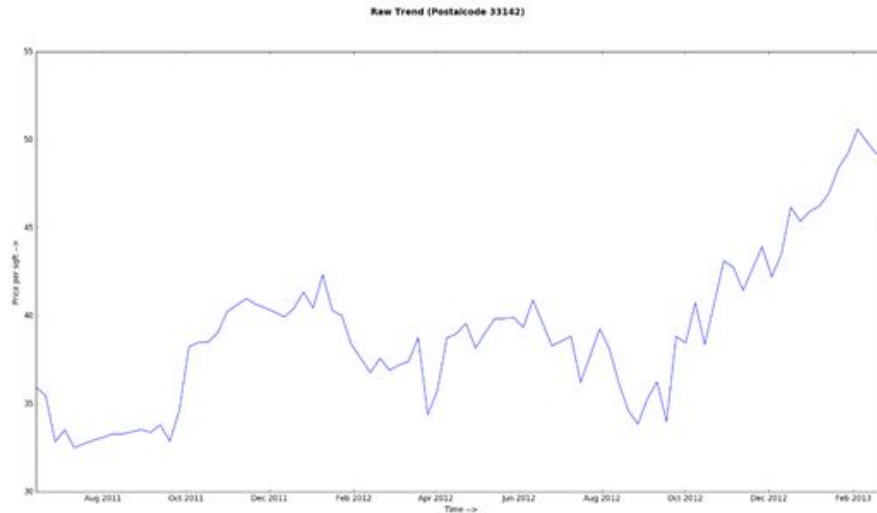
Agent Recruitment

- Recent agent Listing and Selling data by:
  - Property Type
  - Price Bands
  - Zipcode / Neighborhoods
- Inventory & Price predictions
- Agent's social activity - local community & online
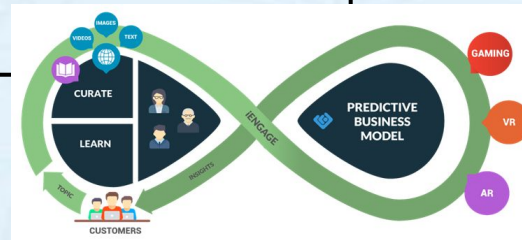
Predictions

- Target agents by expected inventory, property type, and price bands
- Target agents by Zipcode

News based Price Prediction Backtesting Results

Raw Trend (Postalcode 33142)

Actual Price Trend in
Miami, FL
April 2011 - Feb 2013

Linear Extrapolated Trend Overlapped with Sentiment Kernel Trend (Postalcode 33142)

Decreasing confidence factor
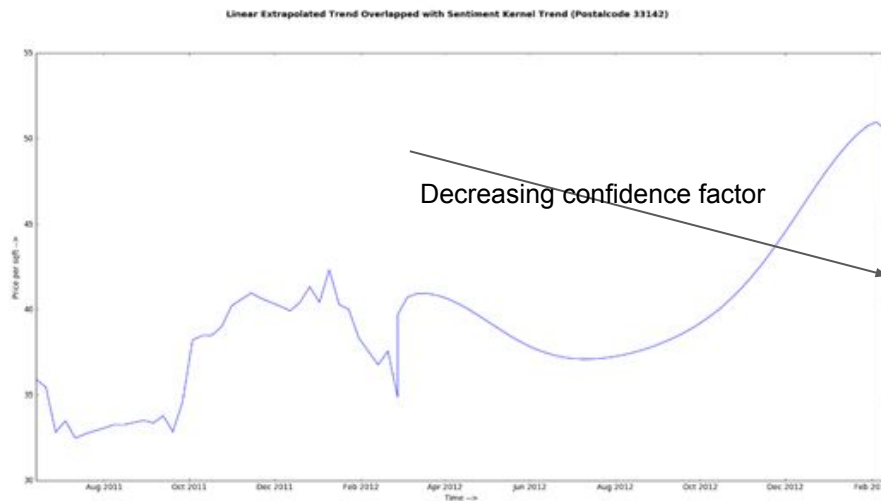
Predicted Price Trend in
Miami, FL
As of March 2012

Image Recognition Model

Millions of images - active inventory and/or historical listings

Classification

- Frontyard
- Backyard
- Family Room
- Kitchen
- Basement

Contextual Object Recognition

- Type of Refrigerator
- Counter Top
- # of Sinks
- Type of Fireplace
- Backyard Playset
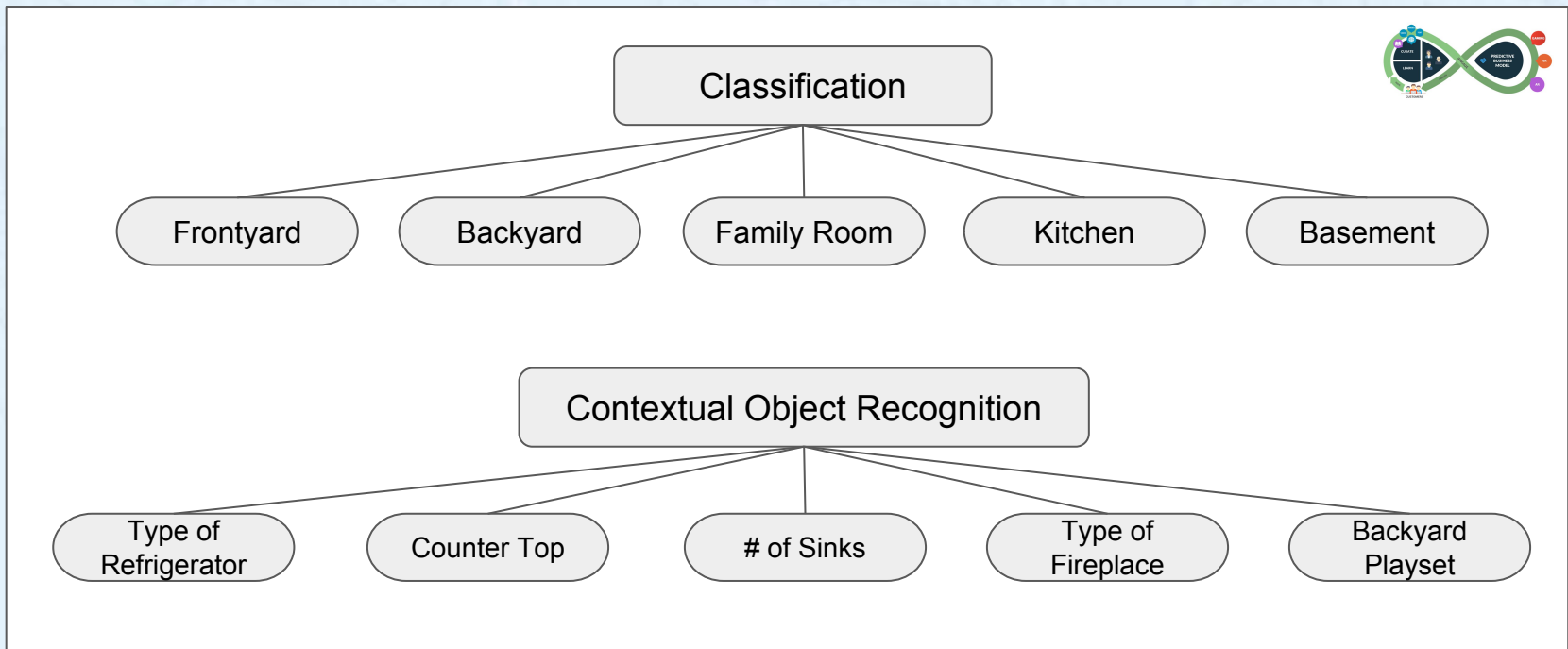
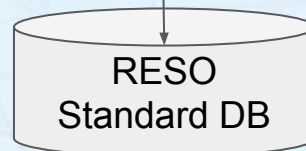# Extracting RESO standard data

Millions of images - active inventory and/or historical listings

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                    ┌──────────────────┐
                    │  Classification  │
                    └──────────────────┘
        ┌──────────┬─────┴─────┬──────────┬──────────┐
   ╭─────────╮ ╭─────────╮ ╭─────────╮ ╭─────────╮ ╭─────────╮
   │Frontyard│ │ Backyard│ │ Family  │ │ Kitchen │ │Basement │
   ╰─────────╯ ╰─────────╯ │  Room   │ ╰─────────╯ ╰─────────╯
                           ╰─────────╯

                ┌────────────────────────────────┐
                │ Contextual Object Recognition  │
                └────────────────────────────────┘
      ┌──────────┬─────────┼─────────┬────────────┐
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  │ Type of │ │ Counter │ │# of Sinks│ │ Type of │ │ Backyard│
  │Refrigera│ │  Top    │ ╰─────────╯ │Fireplace│ │ Playset │
  │  tor    │ ╰─────────╯             ╰─────────╯ ╰─────────╯
  ╰─────────╯
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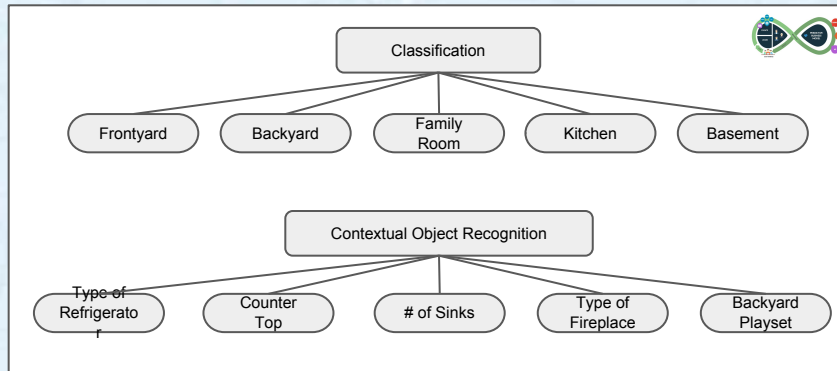
Enrich w/
extracted info

RESO
Standard DB

APIs:
Get SEO optimized image URLs
Get image labels
Get the best thumbnail for a listing
Get organized images for a listing
Find a home with a similar room (coming soon)

Enabling new applications

- Power your IDX
    - Select the best or your favorite thumbnail automatically
    - Compares homes using photos
    - Improve your SEO with better image names and labels
    - Make the photos searchable

- Auto-generate engaging videos of your listing
    - Automated captions

DEMO

Real Estate Data Quality

- Data Standardization vs. Data Quality
- Single Listing Record, Listing History, and Property History
- Accuracy and Consistency against other data sets
  - Public records
  - Neighborhood data

- Data Cleansing

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RESO Member Promotion

50% off our Sally API pricing to all RESO members

Explore new areas:

RESO Media Labeling Standards

RESO Data Quality Metrics

QUESTIONS?

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