



Introducing transforms in Elastic machine learning

Tom Grabowski, Product Manager for ML

Steve Dodson, Tech Lead for ML

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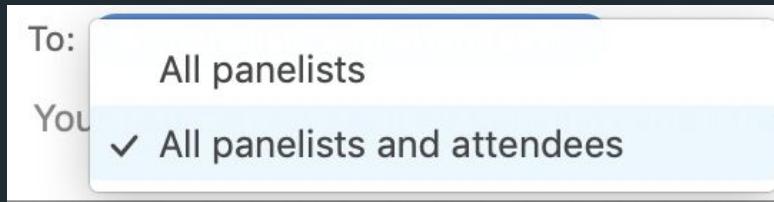
Tom Grabowski
Product Manager, ML
Elastic



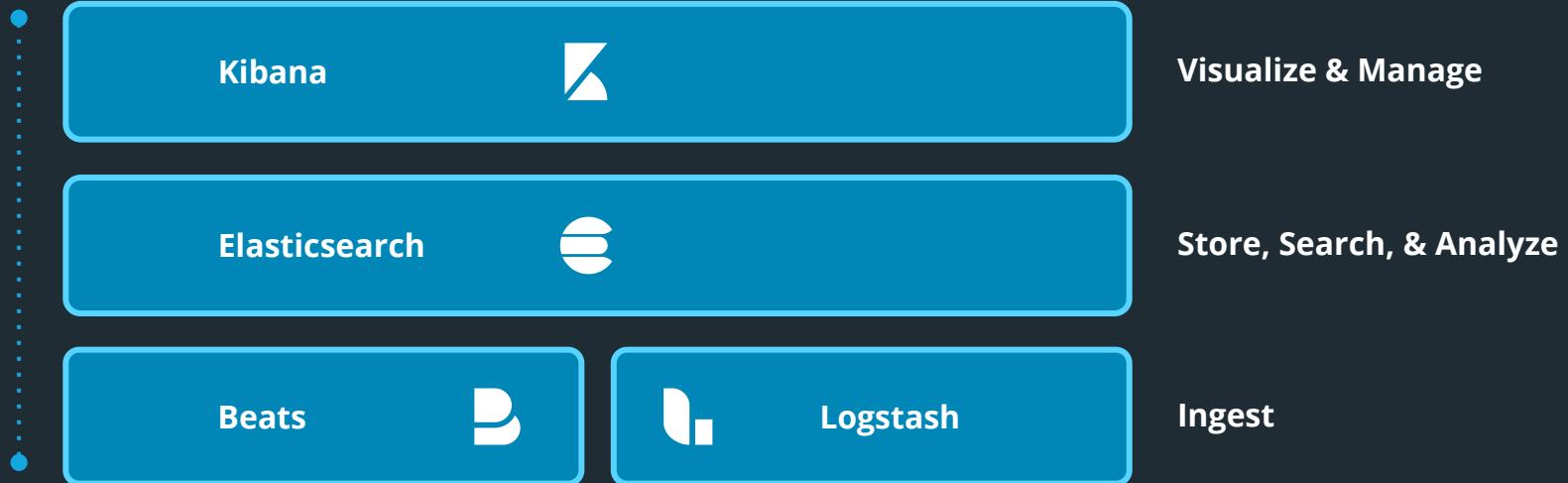
Steve Dodson
Tech Lead, ML
Elastic

Housekeeping & Logistics

- Attendees are automatically muted when joining Zoom
- Q+A will be at the end of the webinar
- Ask questions for us in the Zoom chat during the webinar
 - Chat settings **To: All panelists and attendees**



- Ask more questions on our discuss forum: **discuss.elastic.co**
- **Recording** will be available after the webinar and emailed to all registrants





Elastic Stack



Solutions

Kibana



Visualize & Manage

Elasticsearch



Store, Search, & Analyze

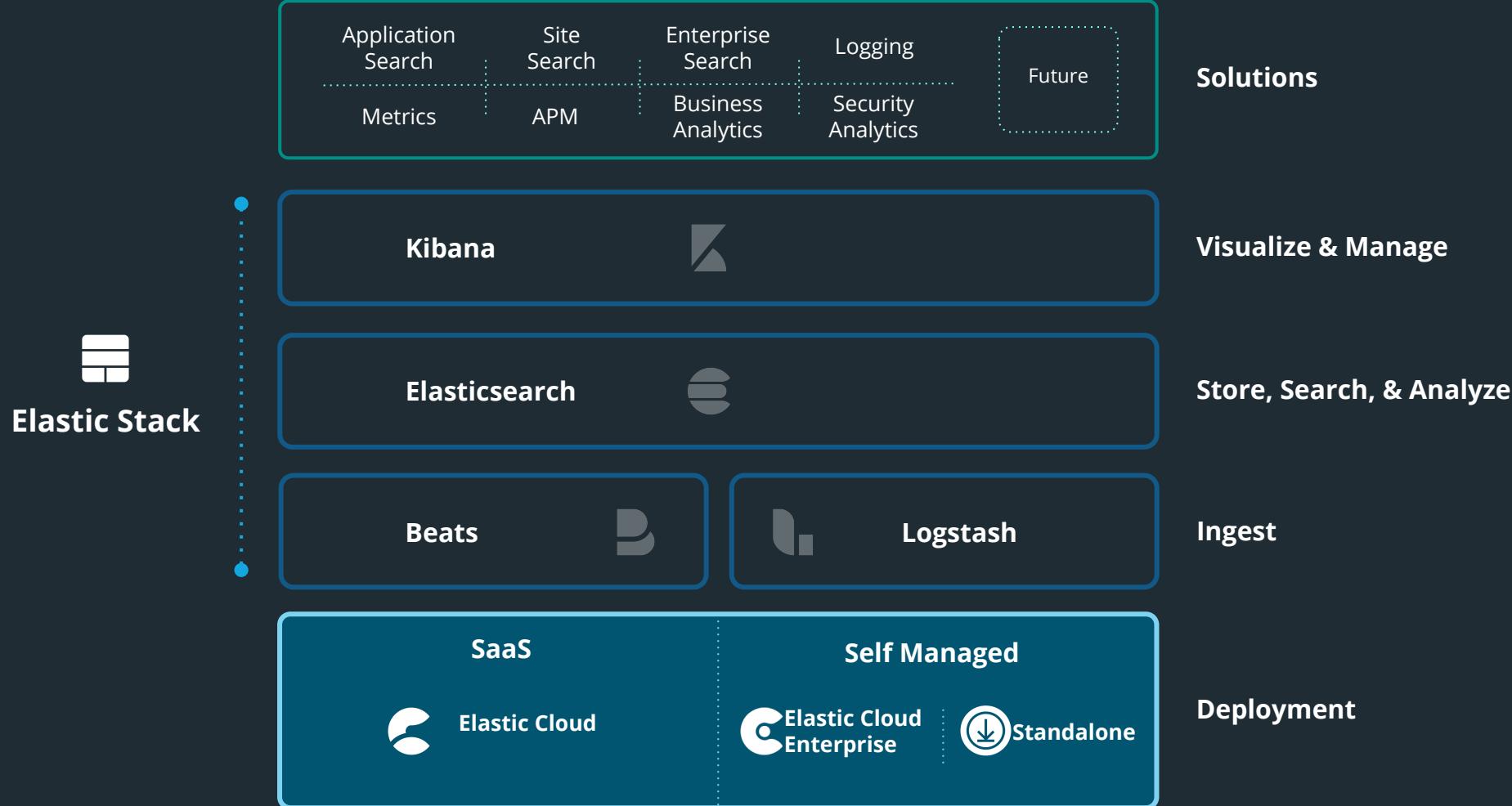
Beats



Logstash

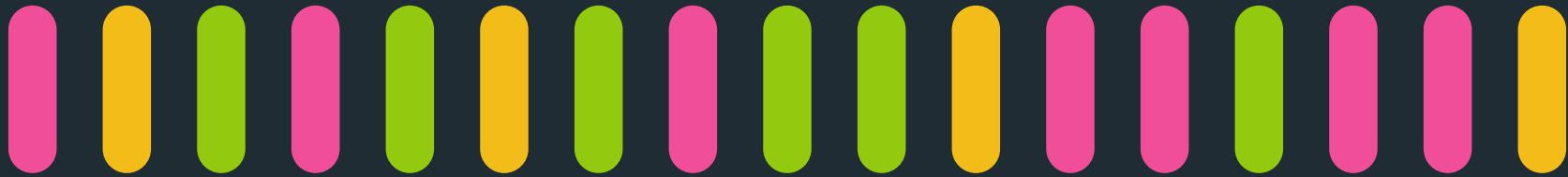


Ingest

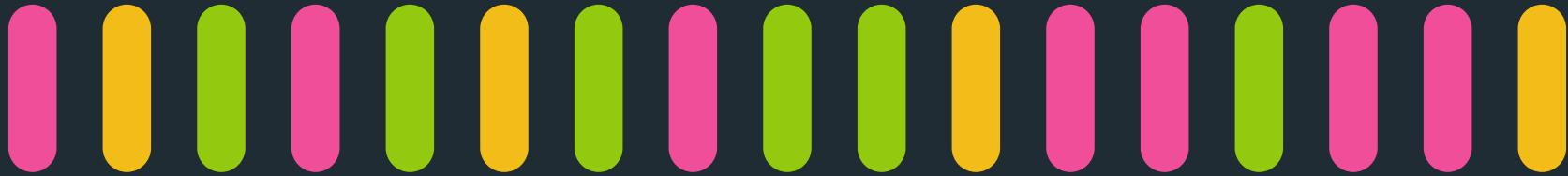


Data Transforms

Clickstream data



Clickstream data



Most frequent URLs?

Clickstream data



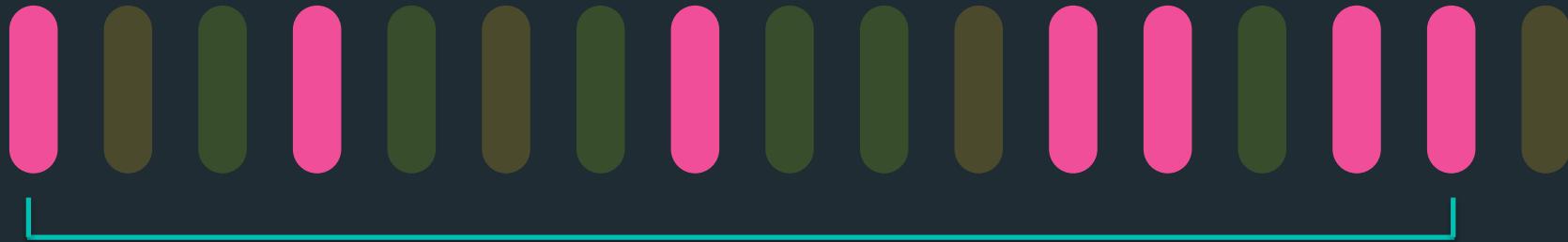
Page views per minute?

Clickstream data



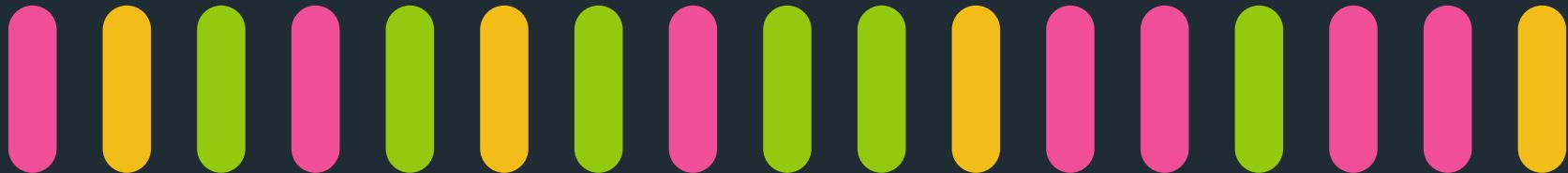
How long was session x?

Clickstream data



How long was session x?

Clickstream data



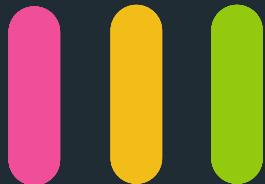
Average session duration?

Clickstream data



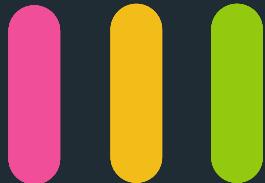
Average session duration?

Session data



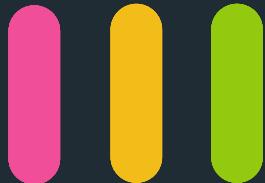
Average session duration?

Session data



Average number of pages per session?

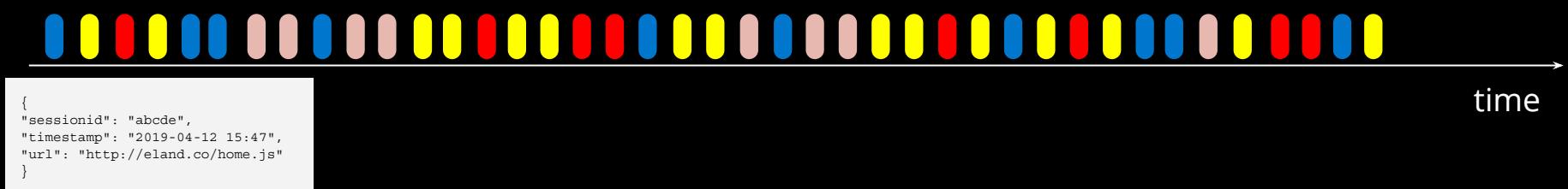
Session data



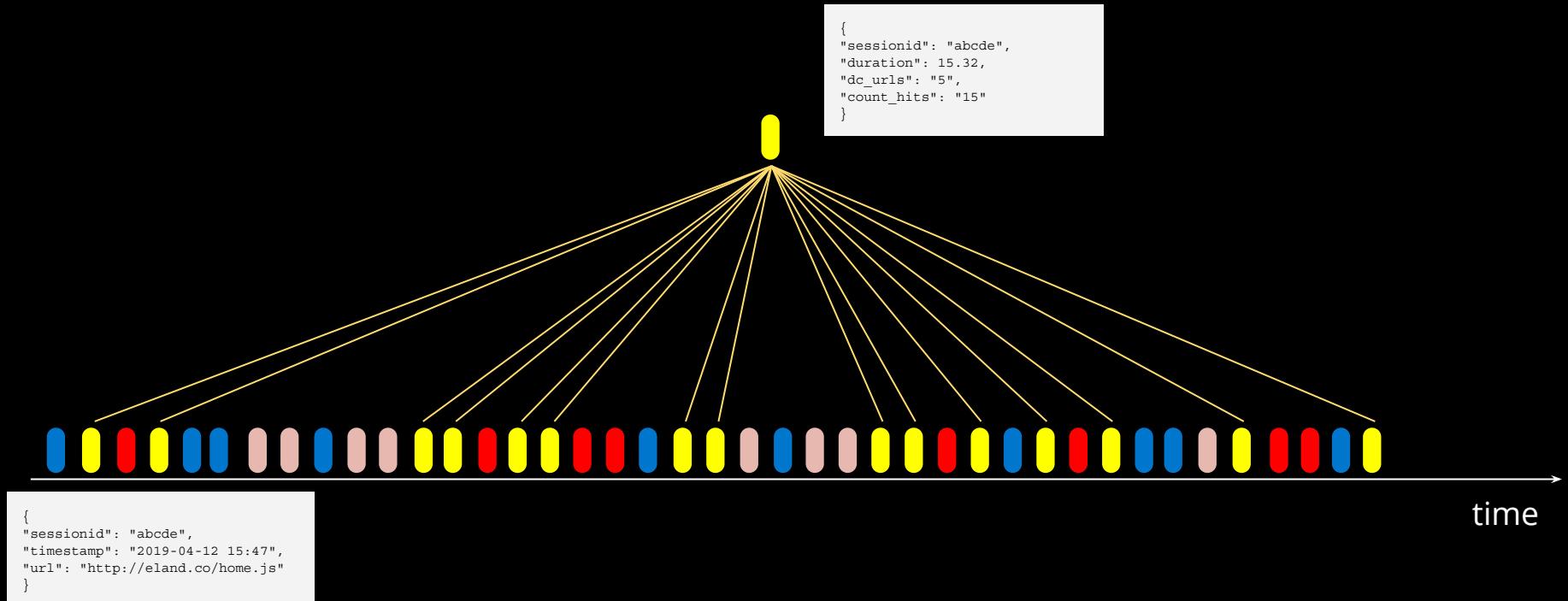
Most frequent exit page per session?

Demo Time

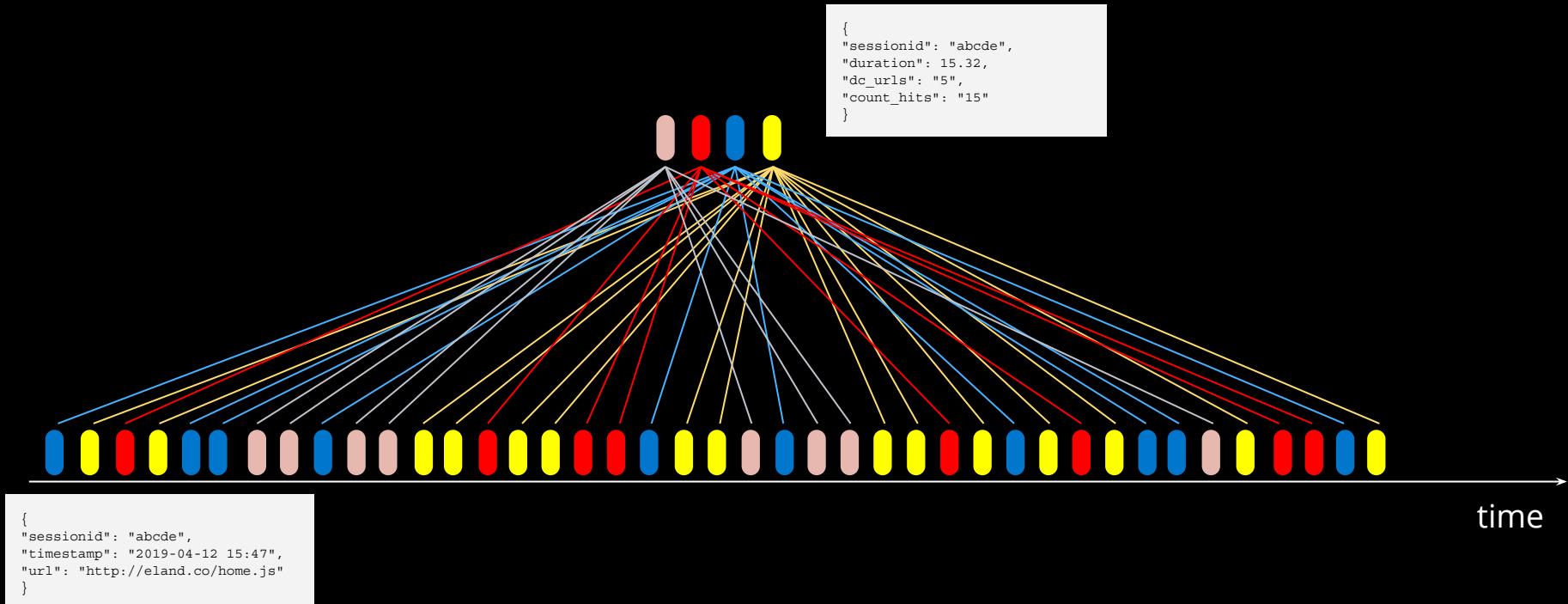
Pivot Transform



Pivot Transform



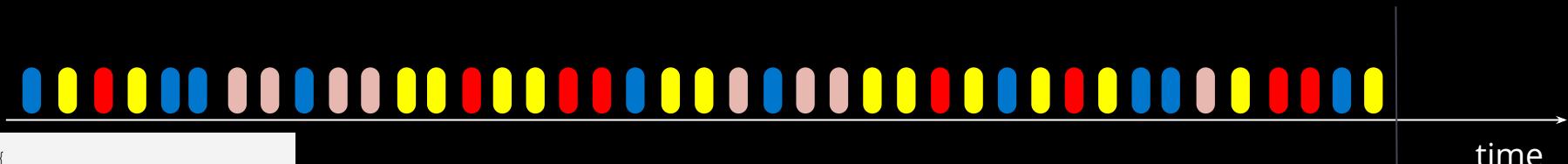
Pivot Transform



Continuous Pivot Transform



```
{  
  "sessionid": "abcde",  
  "duration": 15.32,  
  "dc_urls": "5",  
  "count_hits": "15"  
}
```

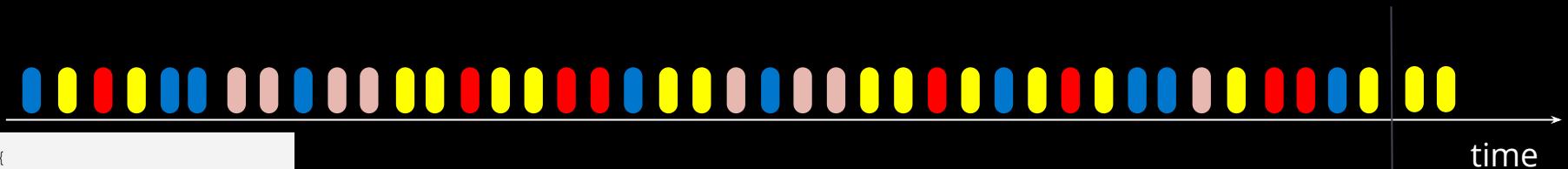


```
{  
  "sessionid": "abcde",  
  "timestamp": "2019-04-12 15:47",  
  "url": "http://eland.co/home.js"  
}
```

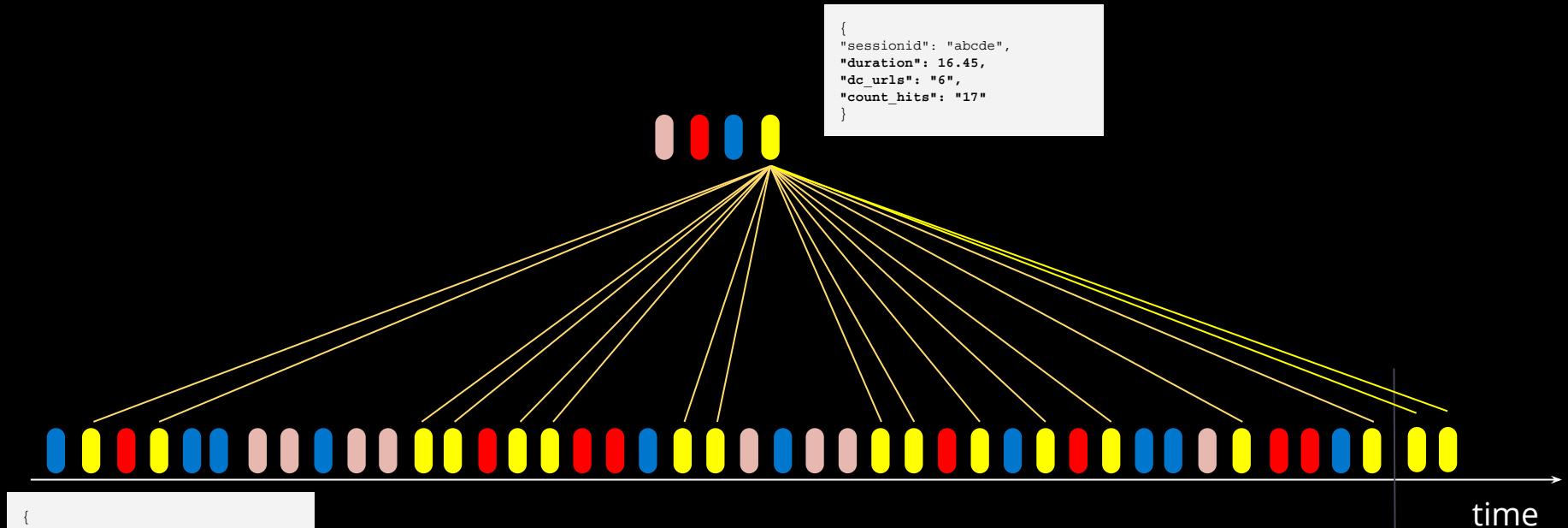
Continuous Pivot Transform



```
{  
  "sessionid": "abcde",  
  "duration": 15.32,  
  "dc_urls": "5",  
  "count_hits": "15"  
}
```



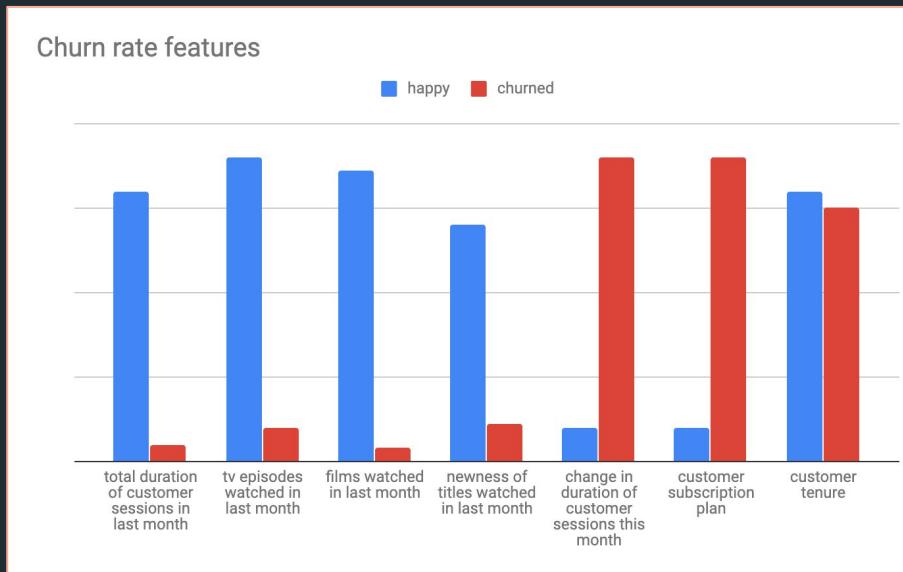
Continuous Pivot Transform



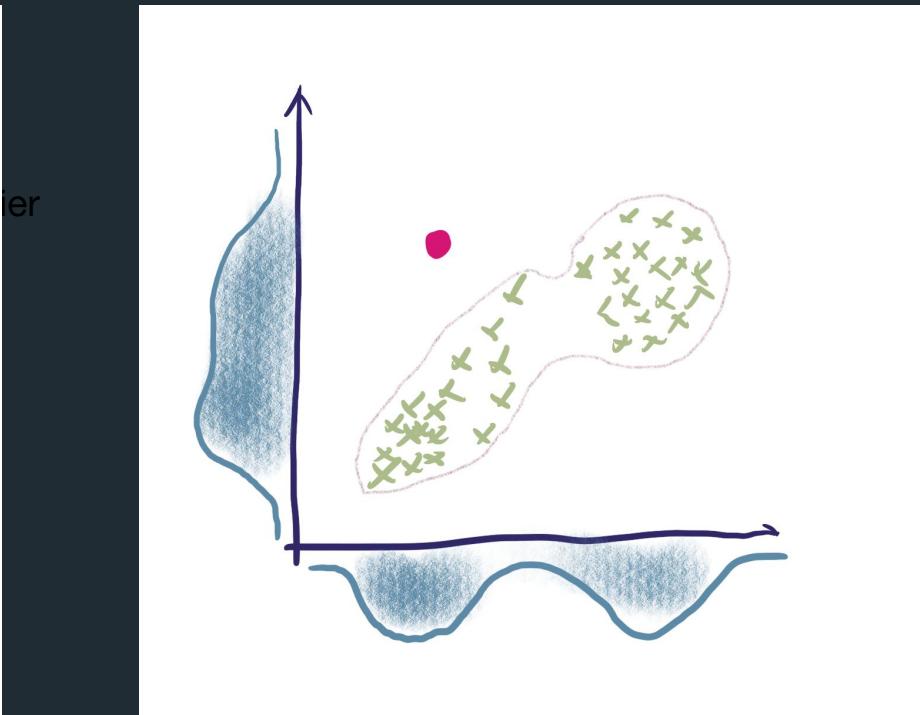
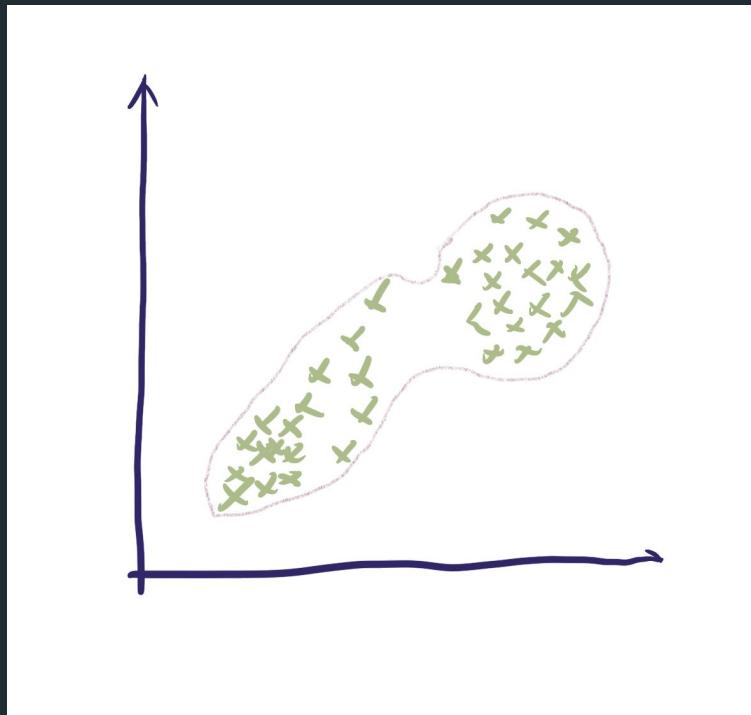
Demo Time

Behavioural Analytics

```
{"customer_id": "028fa21e", "session_id": "MA0l6PC5", "@timestamp": "2019-05-08T18:46:22.017Z", "request_type": "streaming_tv", "channel": "bbc", "title": "Line of Duty: Series 5: Episode 6"}  
{"customer_id": "a4ca7c7c", "session_id": "LMSXQXHg", "@timestamp": "2019-05-08T18:49:34.217Z", "request_type": "streaming_film", "channel": "ziggo", "title": "Glass"}  
...
```



Behavioural Analytics



Demo Time

Webinar follow up resources

Data transforms documentation

- Data frame transforms -
<https://www.elastic.co/guide/en/elastic-stack-overview/current/ml-dataframes.html>
- Data frame transforms Kibana UI -
<https://www.elastic.co/guide/en/kibana/current/creating-df-kib.html>
- Helpful examples for getting started -
<https://www.elastic.co/guide/en/elastic-stack-overview/current/dataframe-examples.html>

Webinar data and commands

- <https://github.com/grabowskit/transforms-webinar>



Thank You

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- Forums : <https://discuss.elastic.co/>
- Community : <https://www.elastic.co/community/meetups>
- Twitter : @elastic



Questions?
