# LDA for Magic in R

This is an attempt a replecating Hlynur Davíð Hlynsson's Finding Magic: The Gathering archetypes with Latent Dirichlet Allocation article using R.

First thing we'll do is import the libaries that we'll need. Once that's done, we'll download the CSV file from MTGDecks.

Now that we have the data, it's time to and convert it into a dataframe. We'll do this by attatching

```
ap_lda <- LDA(Standard, k = 6, control = list(seed = 1234))
ap_lda
```

```
## A LDA_VEM topic model with 6 topics.
```

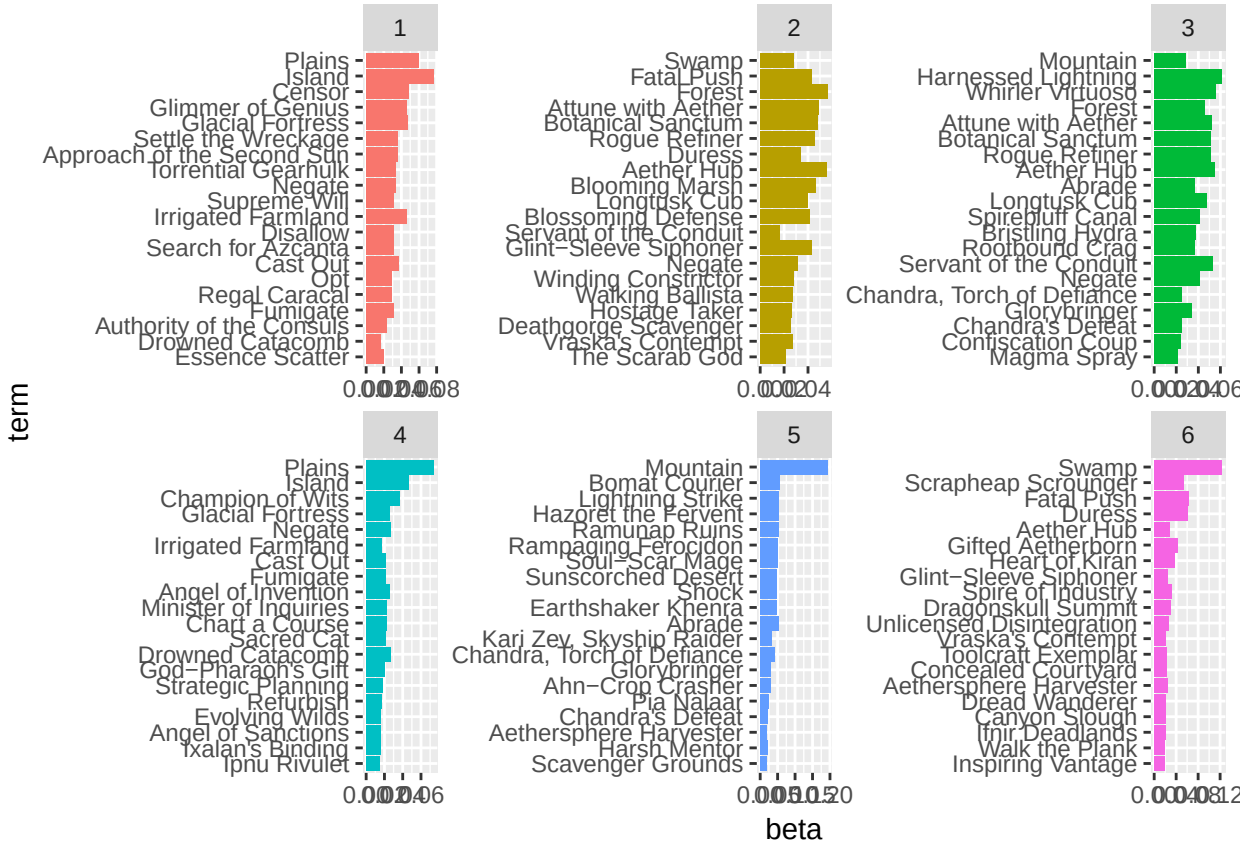
```
ap_topics <- tidy(ap_lda, matrix = "beta")
ap_topics
```

```
## # A tibble: 2,184 x 3
##    topic       term         beta
##    <int>      <chr>        <dbl>
##  1     1     Abrade 3.815616e-08
##  2     2     Abrade 3.868282e-14
##  3     3     Abrade 3.707855e-02
##  4     4     Abrade 2.844563e-13
##  5     5     Abrade 5.282143e-02
##  6     6     Abrade 5.133107e-03
##  7     1 Aether Hub 1.245859e-02
##  8     2 Aether Hub 5.568616e-02
##  9     3 Aether Hub 5.495778e-02
## 10     4 Aether Hub 1.023489e-05
## # ... with 2,174 more rows
```

```
library(ggplot2)

ap_top_terms <- ap_topics %>%
  group_by(topic) %>%
  top_n(20, beta) %>%
  ungroup() %>%
  arrange(topic, -beta)

ap_top_terms %>%
  mutate(term = reorder(term, beta)) %>%
  ggplot(aes(term, beta, fill = factor(topic))) +
  geom_col(show.legend = FALSE) +
  facet_wrap(~ topic, scales = "free") +
  coord_flip()
```


1
Plains
Island
Censor
Glimmer of Genius
Glacial Fortress
Settle the Wreckage
Approach of the Second Sun
Torrential Gearhulk
Negate
Supreme Will
Irrigated Farmland
Disallow
Search for Azcanta
Cast Out
Opt
Regal Caracal
Fumigate
Authority of the Consuls
Drowned Catacomb
Essence Scatter
2
Swamp
Fatal Push
Forest
Attune with Aether
Botanical Sanctum
Rogue Refiner
Duress
Aether Hub
Blooming Marsh
Longtusk Cub
Blossoming Defense
Servant of the Conduit
Glint−Sleeve Siphoner
Negate
Winding Constrictor
Walking Ballista
Hostage Taker
Deathgorge Scavenger
Vraska's Contempt
The Scarab God
3
Mountain
Harnessed Lightning
Whirler Virtuoso
Forest
Attune with Aether
Botanical Sanctum
Rogue Refiner
Aether Hub
Abrade
Longtusk Cub
Spireguff Canal
Bristling Hydra
Roothound Crag
Servant of the Conduit
Negate
Chandra, Torch of Defiance
Glorybringer
Chandra's Defeat
Confiscation Coup
Magma Spray
4
Plains
Island
Champion of Wits
Glacial Fortress
Negate
Irrigated Farmland
Cast Out
Fumigate
Angel of Invention
Minister of Inquiries
Chart a Course
Sacred Cat
Drowned Catacomb
God−Pharaoh's Gift
Strategic Planning
Refurbish
Evolving Wilds
Angel of Sanctions
Ixalan's Binding
Ipnu Rivulet
5
Mountain
Bomat Courier
Lightning Strike
Hazoret the Fervent
Ramunap Ruins
Rampaging Ferocidon
Soul−Scar Mage
Sunscorched Desert
Shock
Earthshaker Khenra
Abrade
Kari Zev, Skyship Raider
Chandra, Torch of Defiance
Glorybringer
Ahn−Crop Crasher
Pia Nalaar
Chandra's Defeat
Aethersphere Harvester
Harsh Mentor
Scavenger Grounds
6
Swamp
Scrapheap Scrounger
Fatal Push
Duress
Aether Hub
Gifted Aetherborn
Heart of Kiran
Glint−Sleeve Siphoner
Spire of Industry
Dragonskull Summit
Unlicensed Disintegration
Vraska's Contempt
Toolcraft Exemplar
Concealed Courtyard
Aethersphere Harvester
Dread Wanderer
Canyon Slough
Ifnir Deadlands
Walk the Plank
Inspiring Vantage
term
beta