Exploration and Visualization of Topics in the Quranic Text using Topic Modeling

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Motivation

The Quran consists of 114 chapters which in turn consist of verses:

- A topic could repeat in different chapters sometimes in different contexts
- A chapter usually consists of many topics
- While a topic starts in one verse, another topic may start immediately in the next verse
- One verse may consist of many topics

Motivation

Many topics are scattered over many chapters and verses:

- Quran index lists only the titles of the chapters
- Might need to read the Quranic text several times to gain a basic knowledge of what topics are contained in the Quran

Objective

- Apply a topic model (LDA) to the Quranic text to discover topics
- Provide a visualization that allows users to explore these topics
- Users can use discovered topic words to perform web search for further topic details

Demo

Story of Moses:

- Number of topics: 37
- Topic Number: 10
- Lambda Value: 1
- <u>Selected topic words:</u> moses, pharaoh, sorcerers
- Equal size text chunks used

Link to repository: https://github.com/mrahmed/cs410