

# Chris Jones Bot



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# Motivation

- Chicago Tribune Theater Critic
- 30+ years of published works
- Theaters, performances, actors, writers, directors, etc...



# Goals

- Analyze Jones's opinionated text to learn opinions
- Respond to queries in the style of Jones
- Create a conversational interface

# Question Types

- Genre Aggregation (*Do you like genre x?*)
- Personal Thoughts (*Do you have a favorite ... ?*)
- Sentiment (*Do you feel x about y?*)
- Theatre (*What was your favorite show at theater?*)
- Person (*What was x's best performance?*)
- Show (*What did you think of show?*)
- Random (*Describe Chicago Theater*)
- Default (*Talk about subject if query doesn't fit into above framework*)

# Demo: Do You Have a Favorite Playwright?

*Bold, white sentence indicates what our algorithm found as most relevant to query*

Then there's the matter of Chicago. **One can make too much of the link between the city and its favorite playwright.** Mamet left young - - much younger than the Chicago literary icons such as Saul Bellow and Phillip Roth whom he so admires -- and he has infrequently returned. He rarely premiered his later works here. He does not have a close relationship with the Goodman -- or any other Chicago theater. In fairness, he was not widely supported here in his early years (contrary to the way it's often told). And as he points out, his longtime Chicago collaborators (with some exceptions such as Nussbaum, actress Linda Kimbrough, costume designer Nan Cibula- Jenkins and a few others) also have gone to L.A.

*From: The truth about Mamet ; He's a playwright. Not a Chicago playwright, but one who is iconic and, for a time, will be feted with his own festival. Chris Jones talks to the man*

# Demo: Do You Like Hamlet?

*Bold, white sentence indicates what our algorithm found as most relevant to query*

Peter Brook once said that, in essence, everything in regard to "Hamlet" has been done before. The Moody Dane has been young and impetuous, or middle-aged and worn out. Every Oedipal twist in the tale has been tweaked and skewered. **Every concept -- whether it's a frantic Mel Gibson rushing around a dark castle, a regal Kenneth Branagh relishing every last word of verse or Laurence Olivier finding the most flattering lighting -- has been played out, out already.**

*From: A spare, articulate take on 'Hamlet'*

# Demo: What Do You Think of Mike Nussbaum in Hamlet?

*Bold, white sentence indicates what our algorithm found as most relevant to query*

To its credit, B. J. Jones' fluid production fights hard against the excesses of the work. **At this point in his extraordinary career, the emotionally ebullient Mike Nussbaum couldn't be inauthentic if he tried.** The stolid Tracy Letts plays the uptight Albom character, and his persona as a work-crazed journalist whose idea of internal peace is banging out three pieces a day is indisputably credible. On opening night, these crafty but distinct actors eyed each other too warily at times, but their relationship will likely deepen. The play won't deepen, of course. It sees its job as telling damp-eyed listeners that having friends over always beats a day at the mall, buying stuff. And in the final analysis, it's probably right.

*From: `Morrie's' lessons about life do not make for great play*

# Demo: How Is Chicago Different from New York?

*Bold, white sentence indicates what our algorithm found as most relevant to query*

Acting ensembles are more common in Chicago than any other major theater city. **In New York, actors tend to be viewed as a commodity.** And unless they have celebrity status, actors there don't have a great deal of influence over play selection at the city's non-profit theaters, which are mostly led by auteur artistic directors. It's much the same in London. And with a few exceptions -- the Milwaukee Repertory Theater being one -- most American regional theaters don't keep a company of actors. They hire performers by the show. Actors don't get to pick roles for themselves.

But in Chicago -- where actors enjoy more power -- the storied acting ensemble is common.

It defines the Steppenwolf Theatre Company -- a theater that, in its early days, often picked its repertoire based on a talented someone's desire for a juicy role. The recent Lookingglass Theatre production of "Our Town" was specifically designed to showcase the intertwined, creative relationships of its ensemble. Many smaller theaters -- Congo Square, Lifeline, Profiles and many others -- have acting ensembles.

*From: Pondering the ensemble question*



## Demo: But Seriously Though, Have You Ever Been Completely Floored by a Performance?

*Bold, white sentence indicates what our algorithm found as most relevant to query*

Remarkable, Graney has found not one such woman but three: Erin Barlow, Tien Doman and Lindsey Gavel. And that's just as well, because Graney has to cover the likes of Antigone, Ismene, Elektra and Jocasta. **One killer performance would not be enough.** It's hard to say which of these women is the best; they all power through the texts with such relentless force and vocal power that you find yourself sitting bolt upright whenever they show up.

*From: Early days, terrific acting*

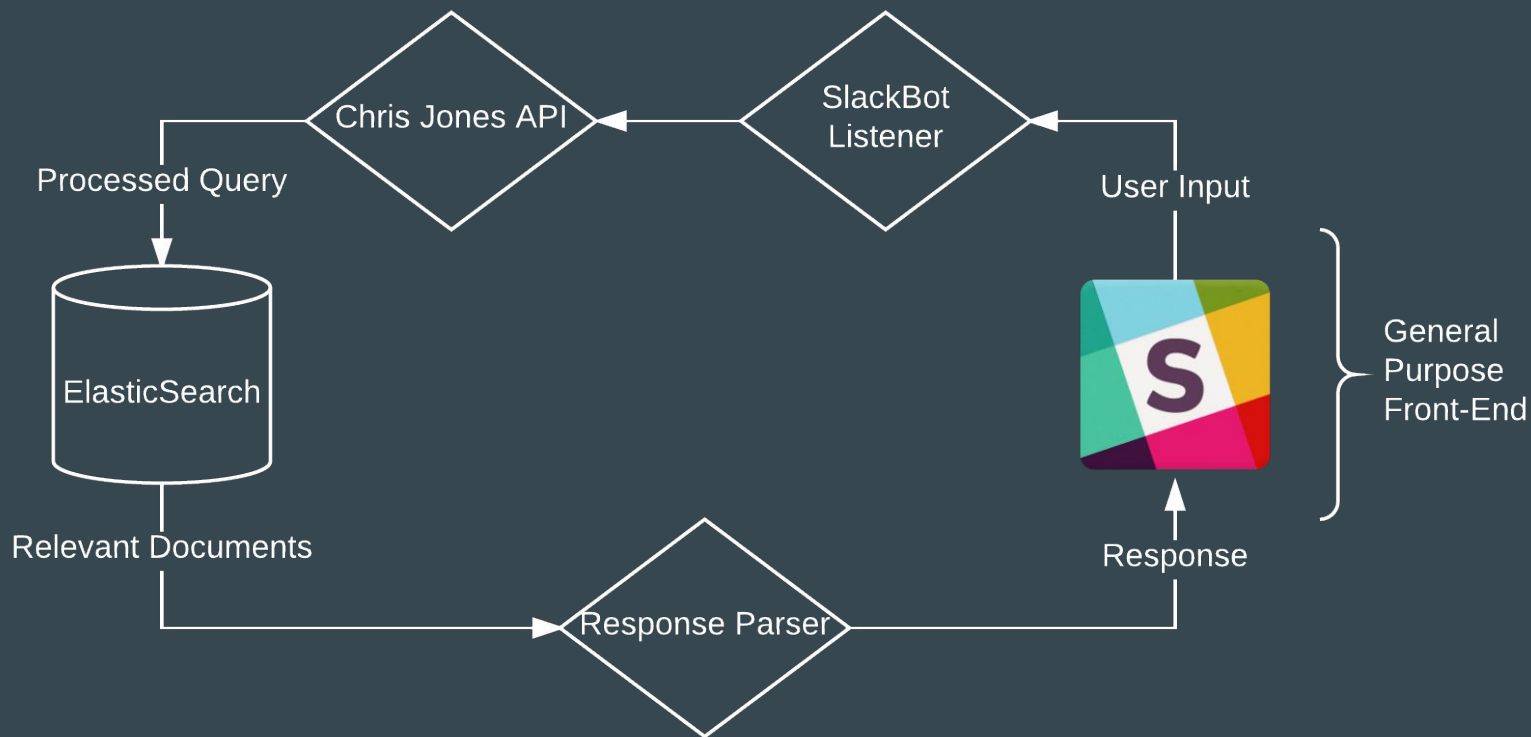
# Demo: How Do You Like Your Comedy?

*Bold, white sentence indicates what our algorithm found as most relevant to query*

**I like my comedy nasty.** Based on what I saw at Just for Laughs last year, there is no act more cynical and destructive than Jeff Ross, whose roasts of various semi-luminaries (hapless Cubs players et al.) barely conceal his own self-loathing soul. Mercifully, he's also exceedingly funny, and he looks a lot older than his picture. Ross barbecues for your comedic pleasure this year at Park West.

*From: At TBS Just for Laughs Chicago, let us tell you exactly where to go*

# Architecture



# Preprocessing and Infrastructure

- Parsing and Data Collection
  - ~8000 articles from Jones
  - Other data sources
- Elastic Search
  - Insanely fast
  - Query DSL
  - Fuzzy searching
- Made general purpose API
  - See next steps



# How did we do this - Query Response

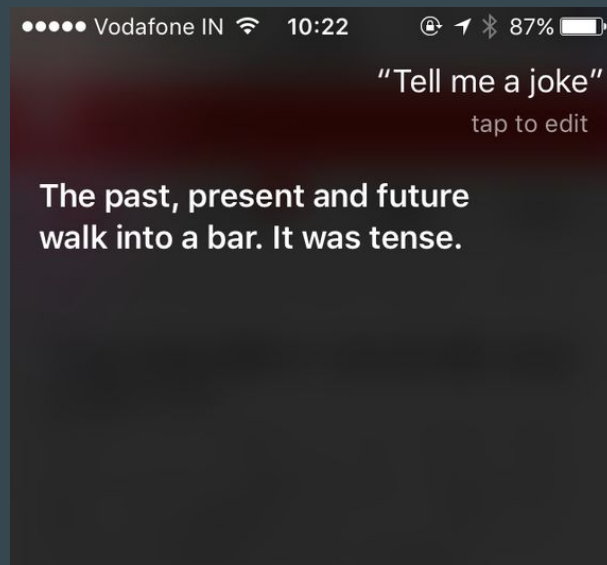
- Query Annotation
  - Google NLP API, custom databases
- Query Router
  - How to group questions?
  - What about questions that don't fall into categories
- Heuristics
  - *Watson-esque* Elasticsearch queries
  - Aggregations
- Response Formatting (Context)

# How did we do this - Heuristics

- Watson-esque Answer Frameworks
- Term Expansions
- Sentiment Analysis
  - Retrieve single document with closest sentiment to average sentiment of all relevant documents
  - Compute subjectivity per sentence using a Naïve Bayes bag-of-words model trained on a subjectivity corpus
  - Return most subjective sentence

# How did we do this - Conversational Style

- Chatbot interface
- Natural language questions turned into queries
- He's not Siri!



# Where to go from here

- We wrote an API for flexibility in front-end choice
  - Facebook Messenger bot might be more useful for the Chicago Tribune than a Slack interface would be
  - Or, could easily use the service on their website, etc.
- Continue to explore the idea of Context
  - Follow-up questions
  - Maybe add links to Full Article Text, Wikipedia pages, etc
- More questions/question types, refine our query implementations



# Appendix A - Query Templates

# Question Groups

More Thorough Question List:

- Do you have a favorite [NOUN]
- How do you like [GENRE]
- Theaters
  - How has [THEATER] changed over time
  - I want to go to [THEATER] do you think it is good
- People
  - What was [PERSON]'s best performance
  - Do you think [PERSON] is a good [NOUN]
  - What do you think of [PERSON]
- Shows
  - What did you think of [SHOW]
  - What do you think is the best [SHOW] right now
  - What do you think of [PERSON] in [SHOW]
- Aggregation (sentiment)
  - E.g. Do you like [NOUN]
- Locations
  - What embodies the essence of chicago theater
  - How is Chicago different from New York?
- Wildcard/Default
  - other

Additional implementation notes may be found on our github wiki

<https://github.com/kapil1garg/eecs338-chris-jones/wiki>