

# From Branes to Strings

A case study on the transition between string theory  
and natural language processing

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# My career as a physicist

- PhD at New York University (5yrs)
- Postdoc 1 at KU Leuven, Belgium (3yrs)
- Postdoc 2 at Uppsala University (4yrs one of which was parental leave)

Research focused around string cosmology with a specialty in using phase transitions and dynamical branes in flux compactifications to give rise to time-dependent 4D cosmologies.

14 papers

# My career as an ex-physicist

Machine Learning Engineer/Researcher at EliseAI (3yrs)

- EliseAI is a tech start-up whose clients are multi-family property-management companies. We handle all their communications across email/sms/chat/phone using AI. (Also a growing healthcare department.)
- When I joined the company was ~50 people, and now it is >300.
- The company is based in NYC and I am one of the only full-remote engineers.

1 as-of-yet unpublished paper.

# Comparison:

## Tech start-up pros

Immediate tangible impact of my work  
(make/save the company money, make  
people's jobs easier, decrease user's  
frustration)

Quantifiable appreciation from the  
company, my co-workers and customers  
(\$\$\$, responsibility, freedom, flexibility)

Job security: modulo layoffs or getting  
fired.

## Academia pros

Inspiring and fascinating subject  
matter.

Working with physicists and  
participating in a global community.

Teaching others about your subject  
and your work.

No real demands outside of what  
you place on yourself.

Working on difficult, technical, engaging problems (although I haven't encountered much use for higher level abstraction in ML)

# How did I make my “decision” to leave academia?

- Academia made the decision for me: I applied very aggressively to tenure-track positions over the last 2 years of my 2nd postdoc, and very lazily to 3rd postdocs, and I did not get any of either.
- I decided that:
  - I was not going to work on topics that I didn't find extremely interesting,
  - I would not be a less-than-equal contributor in any collaboration,
  - I would not publish anything that I was not proud of,
  - I would not push myself to publish while on parental leave
- I decided to restrict 3rd postdoc applications to places I was independently interested in relocating to.
- I decided not to aggressively apply for independent funding (although unlike the other decisions this was more being lazy and tired of the application hustle.)

# My Advice

- I have “no regrets” about losing a job I loved. By making my decisions I was able to fully enjoy my time in academia.
- Don't let what you “have to do” to get a job make it into a job you don't want.
- If you are considering deciding to leave or think it likely that the decision will be made for you:
  - contact everyone you know and interview them on what their job is like and what kind of skills you'd need to do it.
  - Once the decision is made (but preferably before your income is cut off) start developing those skills full time.
- Apply to start-ups