

# **Artificial Intelligence : The future of document generation**

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**Steve Nouri**

Lead Data Scientist,  **Nod.**

# Introduction

**Coding**  
4+ years

**Leadership**  
3+ years

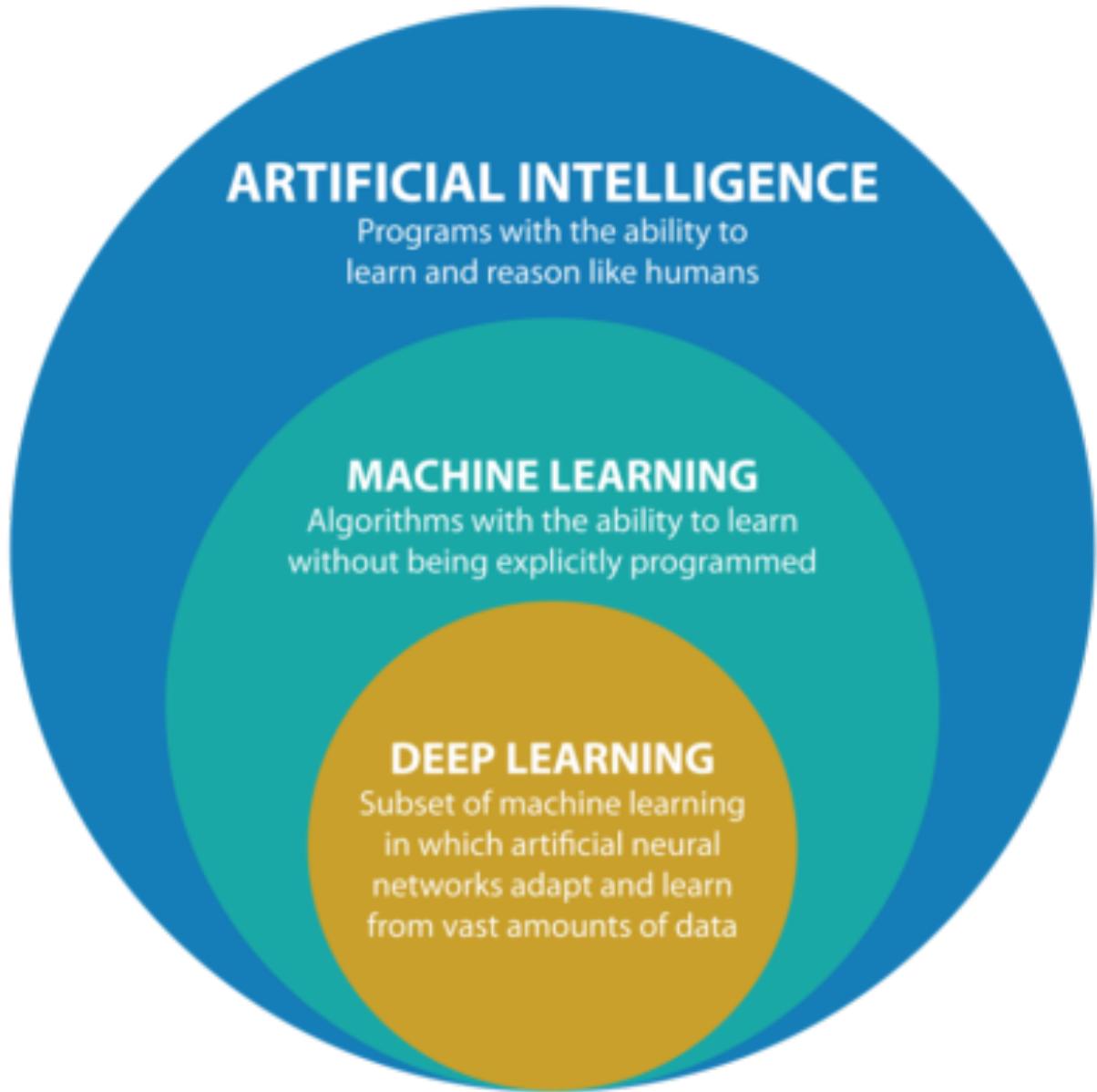
**Theory**  
Master of IT (Data Analytics)  
Bachelor of Software Eng

**Extracurricular**  
10 Competitions  
+ Meetups

My journey to the first  
Data Science role

# What is AI?

Data Science?





# Problem

Producing complete advice documents is time consuming, costly and repetitive work across multiple industries.

**5-7  
days**

Per document waiting for paraplanner to produce Statements of Advice

**\$400 –  
\$2000**

Per document on production cost

**5-7  
days**

per document going through compliance processes and checks

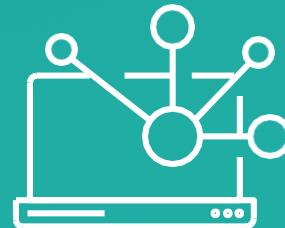
# Solution



Gather historical  
device documents



Understand them with  
NLP and ML



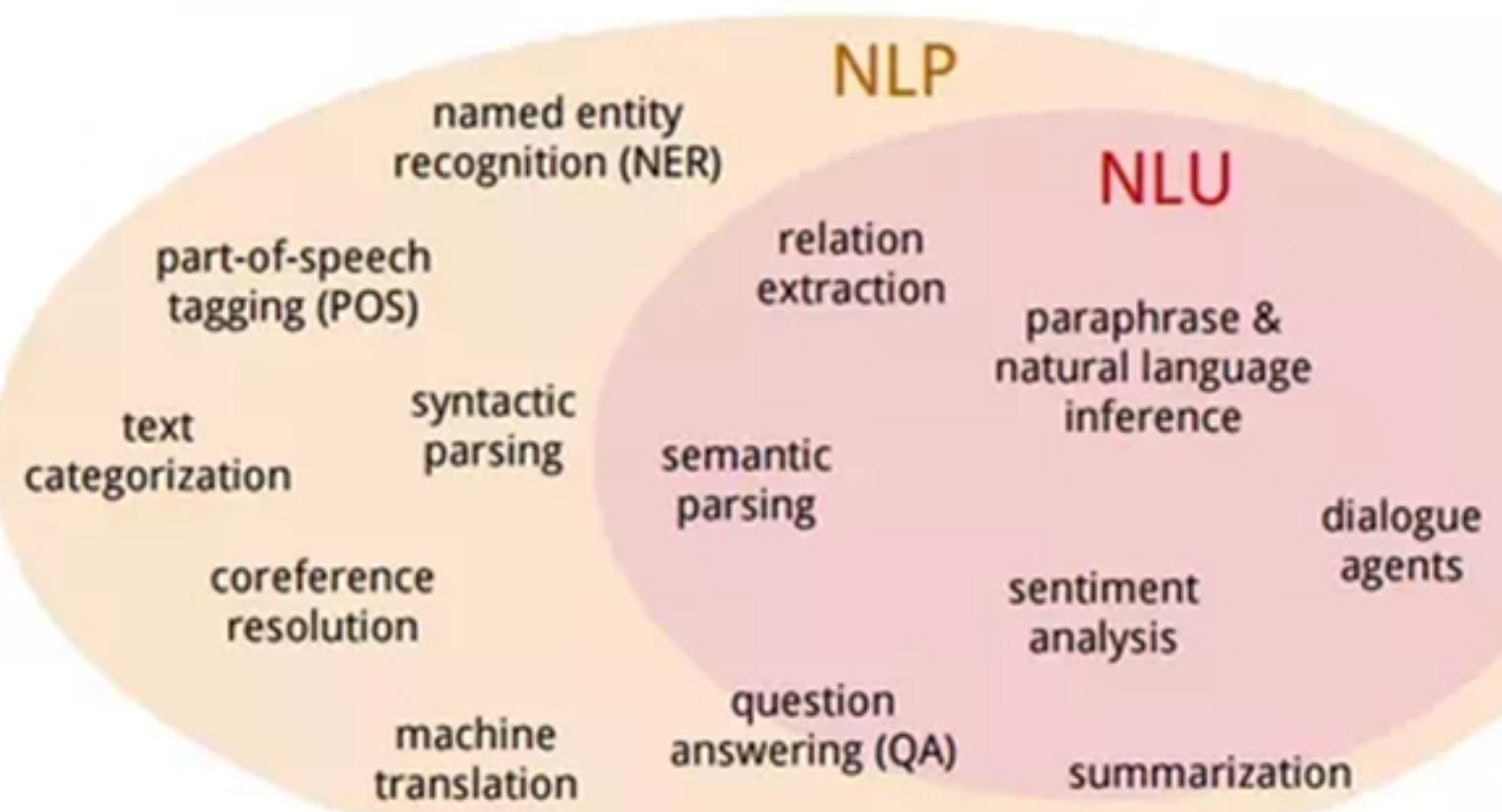
Generate new  
document text



Produce new document  
a beautiful UI

# What is NLP?

## Terminology: NLU vs. NLP

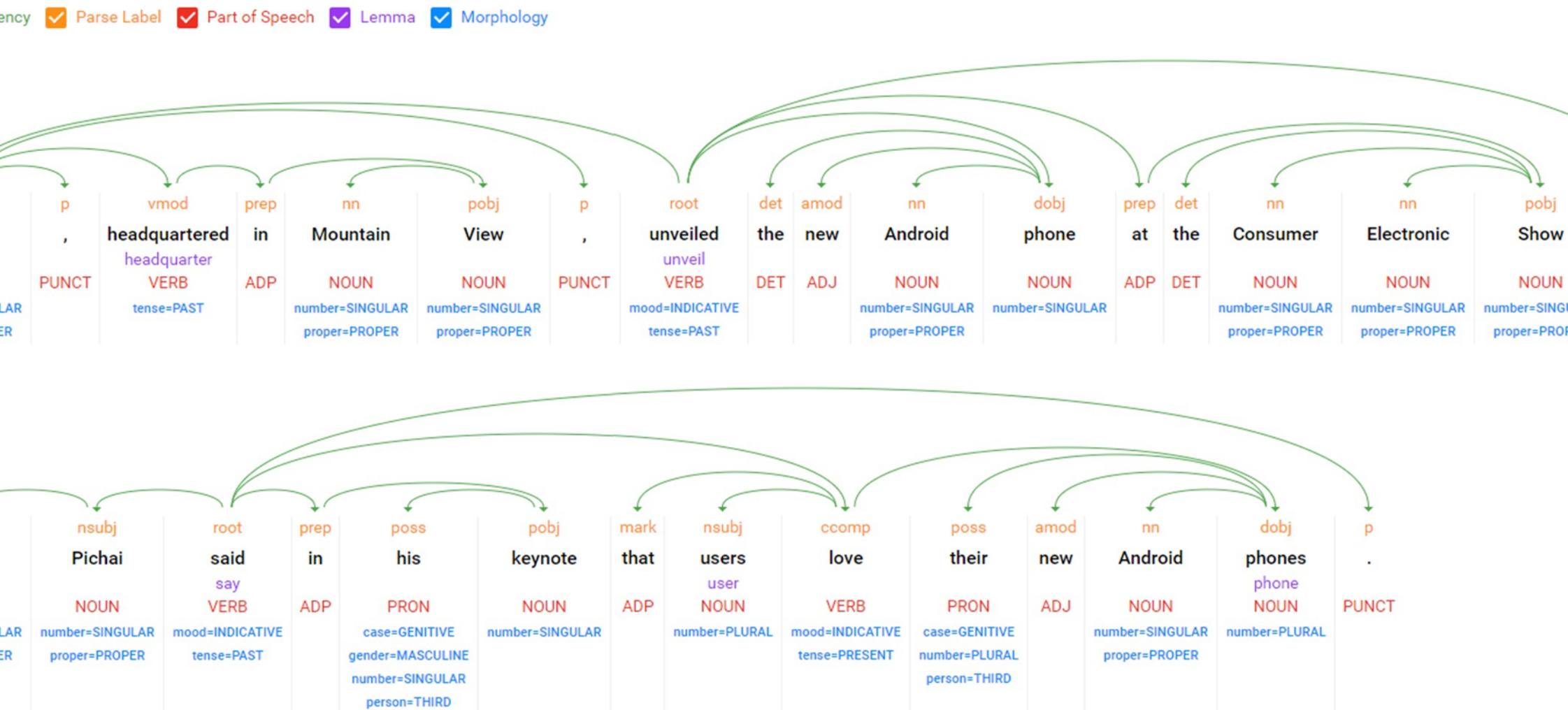


Facebook: 250 million post per hour

Twitter: 21 million tweets per hour

# Syntax

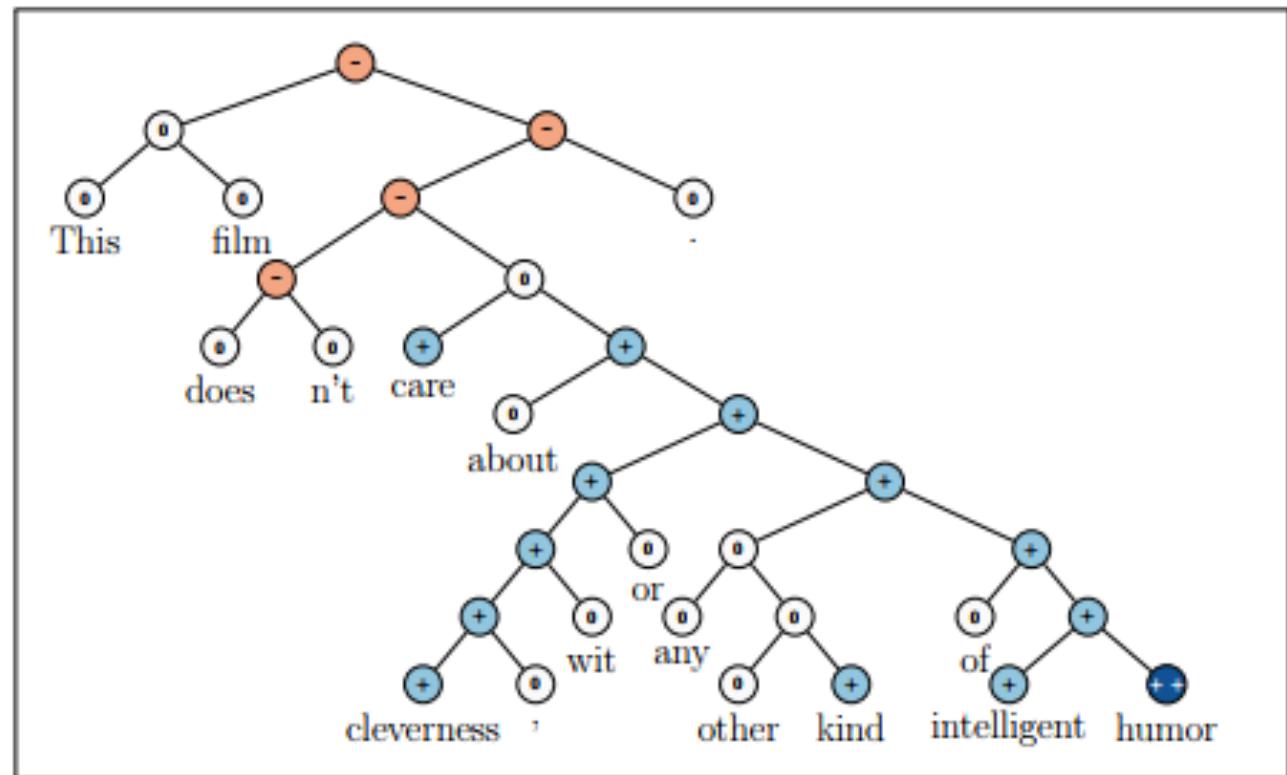
- Lemmatization
- Part-of-speech tagging
- Parsing
- Sentence breaking
- Stemming
- Word segmentation



# Semantics

Lexical semantics  
Machine translation  
Named entity recognition  
Natural language generation  
Question Answering  
Relationship extraction  
Sentiment analysis  
Topic recognition  
Word sense disambiguation

But Google **ORG** is starting from behind. The company made a late push into hardware, and Apple **PRODUCT** Siri **PRODUCT**, available on iPhones **PRODUCT**, and Amazon **ORG**'s Alexa **PRODUCT** software runs on its Echo **PRODUCT** and Dot **PRODUCT** devices, have clear leads in consumer adoption.



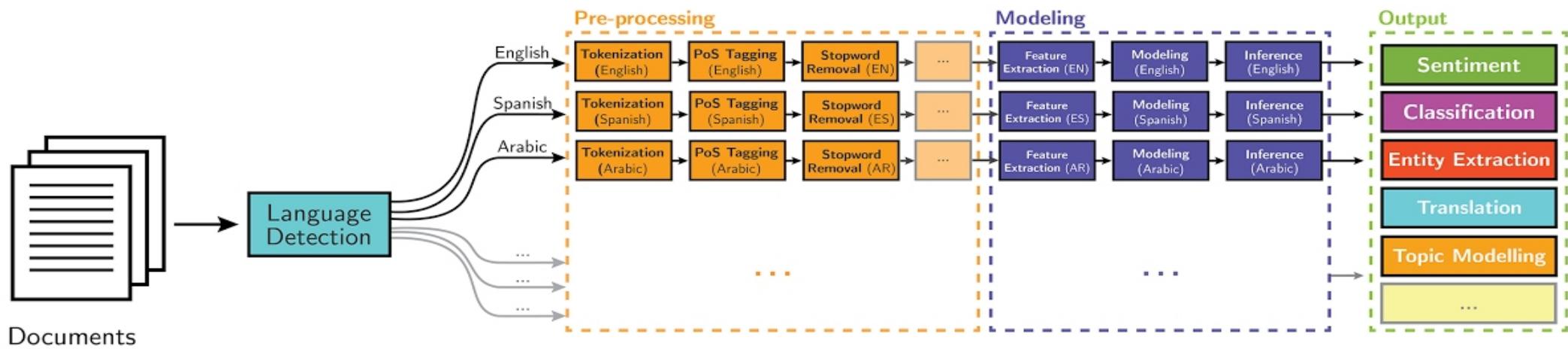
## Advanced Stuff...

Doc2Vec

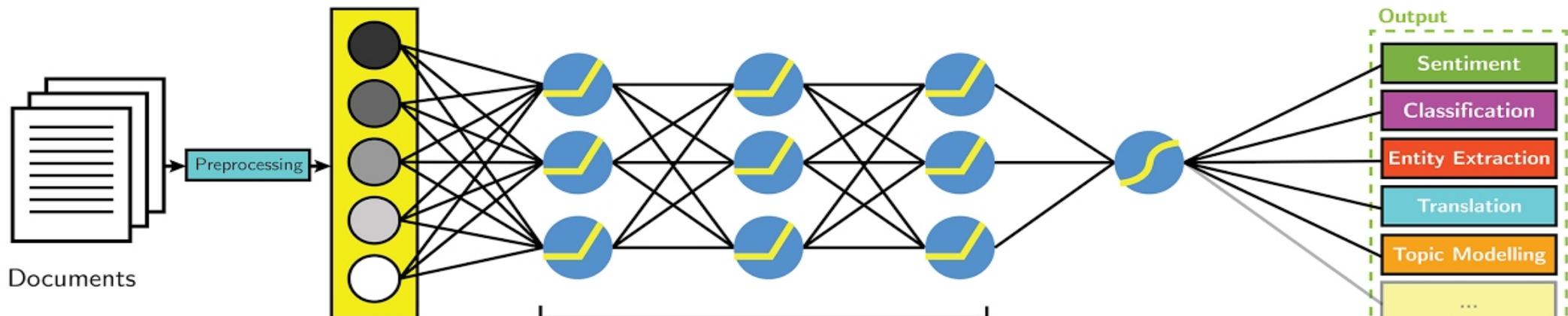
Word2Vec

GloVe

# Deep Learning...



## Deep Learning-based NLP





**Financial Services**



**Legal Services**



**Healthcare**

**Financial Advice**

**Tax Advice**

**Accounting**

**Legal Advice**

**Treatment Plans**

**Health Advice**





**months**  
set up

**8 hours**  
document  
creation

**Templafy<sup>T</sup>**  
**HOTdocs™**  
automated document generation

**6 weeks**  
set up

**2 hours**  
document  
creation

**Nod.**

**5 days**  
set up

**10 minutes**  
document  
creation



## Product

It's early days but we are seeing rapid progress in important product metrics.



15 mins   vs.   7 days

Outsourced  
Paraplanner

8 weeks



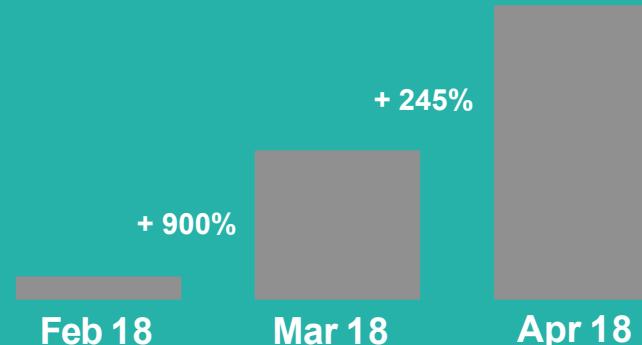
2 weeks

SOA Generation Time

Customer Onboarding Time

## Revenue

Off a low base but green shoots appearing in revenue with new customer contracts driving growth.



## Customers

Achieving strong beach-head in the financial advice industry with blue chip customers signing contracts.



SCHOLTEN  
COLLINS  
McKIS SOCK  
WEALTH MANAGEMENT



Lambert Parkhill Jones



ClearView  
Financial Advice

CAPITAL FOCUSED  
FINANCIAL PLANNING

Accru<sup>+</sup>  
Chartered Accountants + Business Advisors

Dalziel-Don  
wealthfit



INSPIRED  
MONEY

FOX & HARE  
FINANCIAL ADVICE

FORTUNITY  
STRATEGIC ADVISORS

FIRSTUNITY



FORTNUM<sup>TM</sup>  
PRIVATE WEALTH