
SuperDuperDB

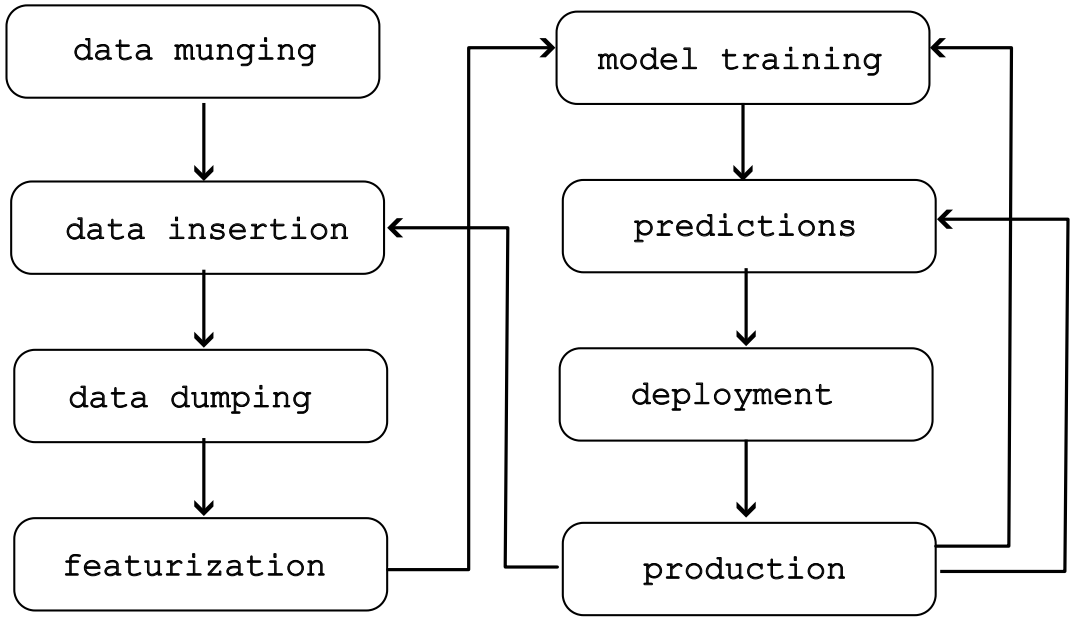
The current AI landscape is hampered by problems of 2 types

1. No unified AI development possible
2. Not ready for ongoing developments in AI

1. Integrating AI and applying AI to data is a huge challenge

- Our experience with scores of large organizations bears this out
- Companies with 8 figure revenue waste 10s-100 of millions $ on doing this

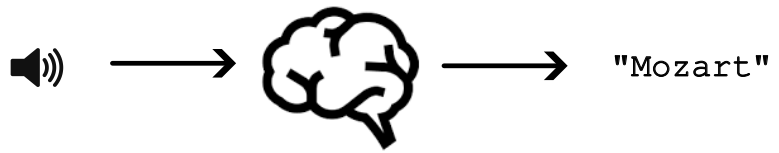
1. The AI lifecycle can be highly complex and interdependent



1. Each building block is supported by different providers

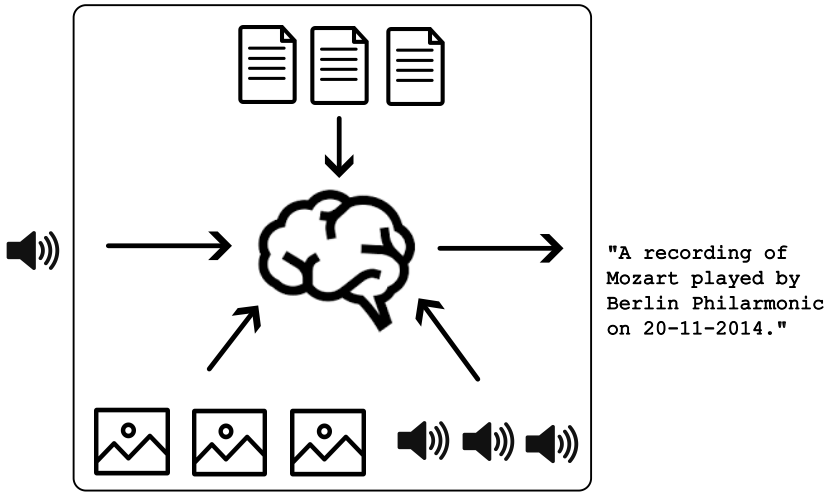
No open source solution supports these steps in a unified way

2. Traditional AI includes all knowledge *in* the model



This is contrary to human intelligence, which incorporates external knowledge, and uses fluid intelligence to make inferences based on this external knowledge

2. However, the latest developments allow AI to "look up" information



From the internet, from books, from user feedback ...

2. This means new AI needs to interoperate closely with the data

- Looking up important insights from the data
- Reading new streaming data
- Updating data on the fly
- Pushing incoming data through the AI model

No existing solution can handle these needs

Introducing SuperDuperDB

SuperDuperDB

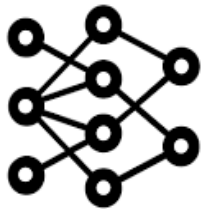
...aims to revolutionize how companies and organizations work with and apply AI to their data

SuperDuperDB

...is based on the fact that *true AI* unites deep learning and data insights

AI

=



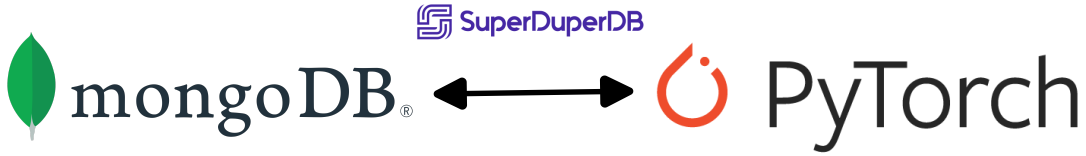
Deep Learning

+

Database

SuperDuperDB

...will unite best in class database and deep learning software



SuperDuperDB

...will lead to deployments and development with never seen before simplicity

1 python command creates deployed multimodal semantic search

```
collection.create_semantic_index(
    filter={'vertical': 'groceries'},
    model=my_model,    # user supplied PyTorch model
    keys=['query', 'product']
)
```

SuperDuperDB

...will allow users to navigate data in a totally new way using the power of AI

Semantic indices available with `$like` operator

```
results = collection.find({
    'vertical': 'groceries',
    'shop': 'cosco',
    '$like': {'document': example, 'n': 10}
})
```

SuperDuperDB

...is infinitely modifiable

...and makes any learning problem with (sub)records as datapoints doable

```
collection.create_model(
    filter={'type': 'legal'},
    model=second_model,
    loss=my_loss,
    metrics=my_metrics,
)
```

SuperDuperDB is based on sleek and shrewd design decisions

PyTorch is the most popular AI framework among experts

(Source: horace.io)

Rank	Percentage Papers	Framework
1.	84%	PyTorch
2.	16%	Tensorflow

SuperDuperDB is based on sleek and shrewd design decisions

MongoDB is the most popular document store in use today

(Source: db-engines.com)

Rank	Database	Score
1.	MongoDB	486
2.	Amazon DynamoDB	88
3.	Databricks	58
4.	Microsoft Azure Cosmos DB	40

SuperDuperDB is based on sleek and shrewd design decisions

Experience building agile AI in Academia, Zalando, LF1 and Attraqt has allowed us to test these choices

PyTorch together with MongoDB allow for deep learning built ***with ease, on a shoestring***.

Developers ***love*** these tools ***passionately***.

SuperDuperDB draws on over a decade of experience in this area

Duncan Blythe

- Graduated first in class Oxford Mathematics 2007
- MMathPhil, MSc, PhD
- 1,000s citations on published top AI research
- 10,000s of stars on GitHub open source
- Exited AlephSearch (bootstrapped) 2020 with team of 2 for mid 7-figure
- Gamut of skills: deep learning, software development, infrastructure, management, lean startup

SuperDuperDB is already in full swing

Progress

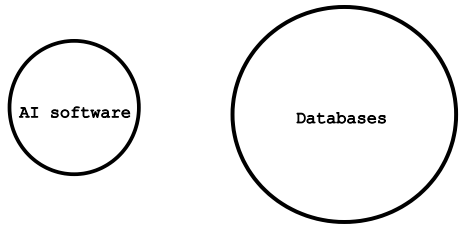
- Working prototype v0.1 in Python
- Installable via Python `pip`
- Initial traction via social media
- Response positive

SuperDuperDB enables a range of well tested business models

- Tiered managed cloud service
- On premises solution with technical support
- Model repository (like "App Store")
- Sub-brands:
    - **LegalTech/ NLP/ e-Commerce/ Biomedical/ Cybersecurity...**
- Consulting
- Certifications

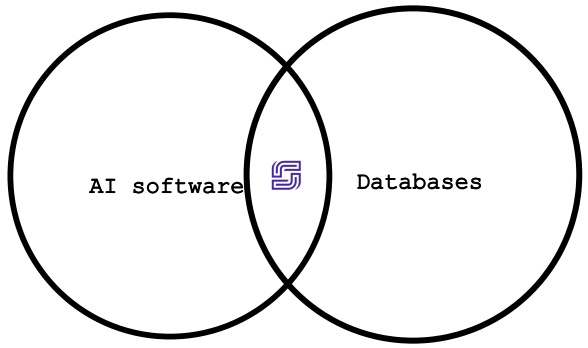
The potential market for SuperDuperDB is huge

2019



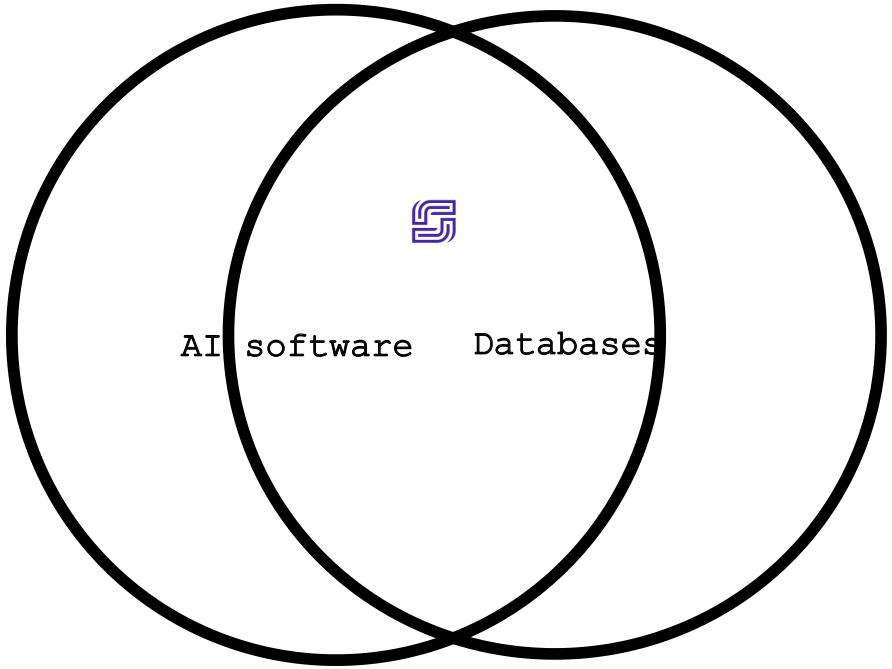
… and rapidly growing

2022



... and rapidly growing

2023 onwards



With SuperDuperDB we aim to

... make large in-roads into the managed database market

Managed databases is a huge market with unprecedented growth (source: gartner.com)

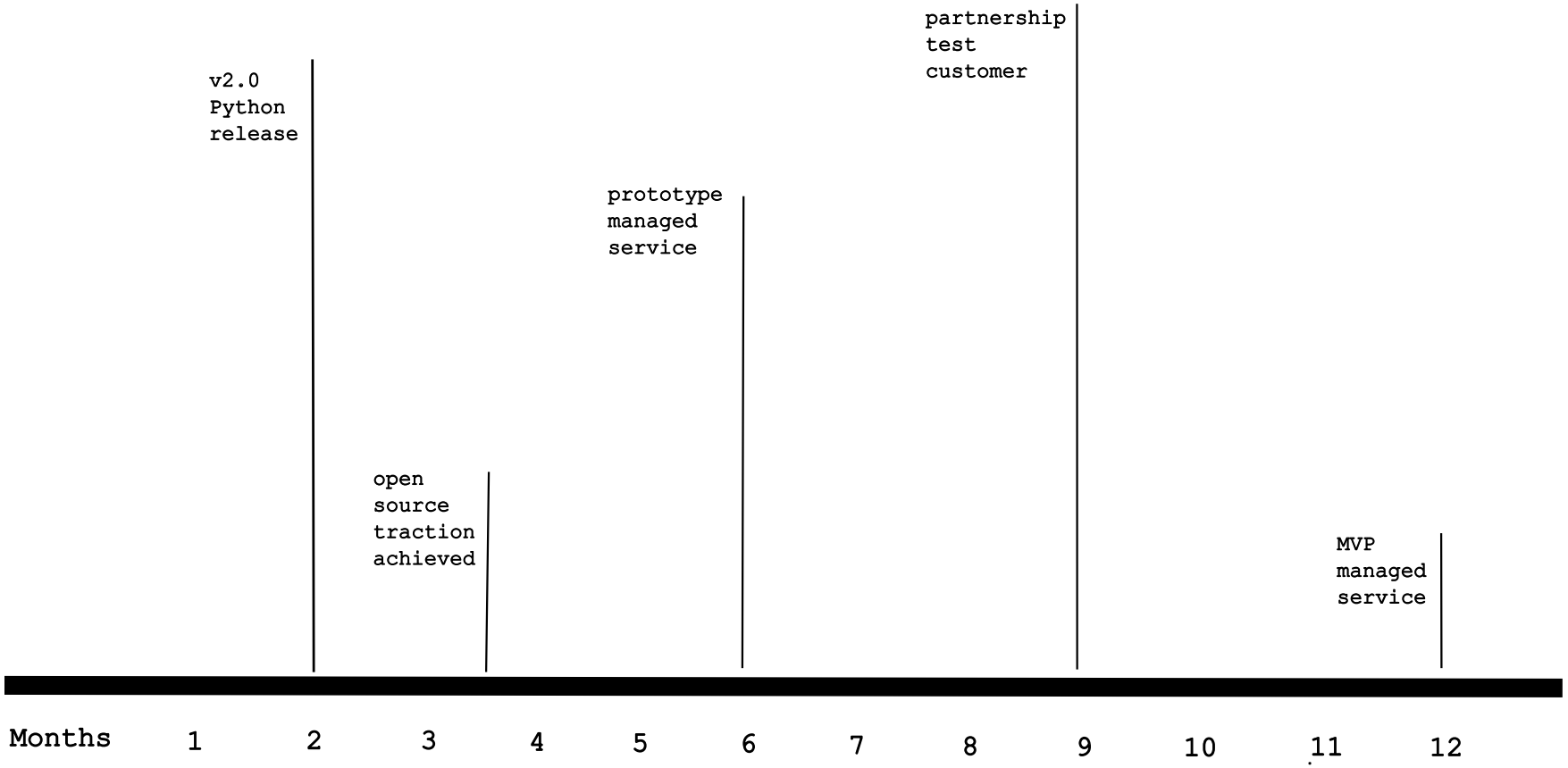
Year	Market Size ($)
2022	80 Billion
2020	65 Billion
2017	39 Billion

...and the managed AI software market

AI software is a burgeoning new market already with huge reach (source: gartner.com)

Year	Market Size ($)
2022	63 Billion
2021	52 Billion

Timeline


v2.0
Python
release
open
source
traction
achieved
prototype
managed
service
partnership
test
customer
MVP
managed
service
Months
1
2
3
4
5
6
7
8
9
10
11
12

The Ask

1 year, 1.2 million €

Item	Count	Cost unit (€)	Cost (€)
Python developer	3	80,000	240,000
Cloud engineer	2	90,000	180,000
Research scientist	2	100,000	200,000
Marketing	1	60,000	60,000
Cloud Infrastructure	1	100,000	100,000
Management	1	100,000	100,000
Miscellaneous	1	200,000	200,000