Data Science in Insurance

Challenges and Opportunities

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About Us

"We help decision makers implement and understand technology, faster, easier and better

- Companies of all sizes.

- Focus on decision makers
  (CEOs, entrepreneurs, managers)

- Some of our capabilities:
  - AI, data science, Data strategy.
  - Discovery of new data products.
  - RnD
  - Blockchain

https://tesseract.academy

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About Us

Stylianos Kampakis, PhD, CStat
Founder & CEO
Head of Data Science

- +10 years in data science and AI
- PhD in Machine Learning of UCL
- Honorary research fellow at UCL Blockchain Centre
- Data science advisor at LBS

Andrea Maria Cosentino, MSc, IMC
Co-Founder & Partner
Head of Strategy & Delivery

- +10 years in Financial Markets & Strategy
- Background in Finance & Data Science
- Lecturer at ESCP Business School
- Serial Entrepreneur

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Trends

There are many big trends in the use of AI in insurance:

- Behavioural Policy Pricing

- Customer Experience & Coverage Personalization

- Faster, Customized Claims Settlement

- Robotic process automation

- Improved modelling

- Synergies with other technologies (IoT and blockchain)

- Parametric insurance

And many funding-success stories:

WorkFusion

Document Digitization in Insurance

$120M

Attivio

Enterprise Search in Insurance

$100M

Challenges

The insurance industry is sitting on a treasure trove of data

- But it's not always used effectively

- Often there is no data strategy

- No right systems in place

- There is no data-driven culture

Our experience

The customer

Electronic devices insurance company
Work through a network of partners to
deliver insurance to end-customers.

Data issues

Mild, but take time to fix

Major challenges

Customer churn
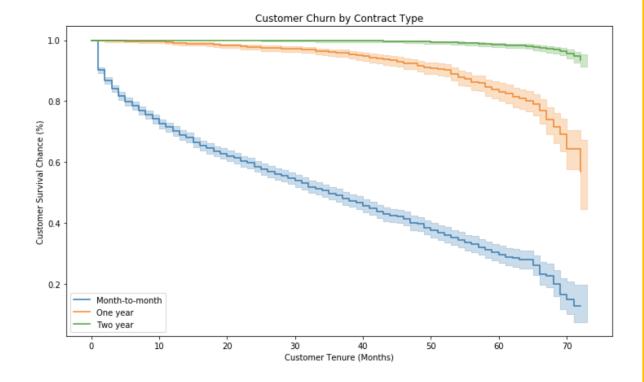Claims prediction

Cultural issues

Attitudes slowly changing
With success you win hearts and minds

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Impact

- Predict 89% of the customers churn.

- Precision up to 90%
  (depending on partner)

- Now running forward test
  and deploying in real life

- We also identified the most
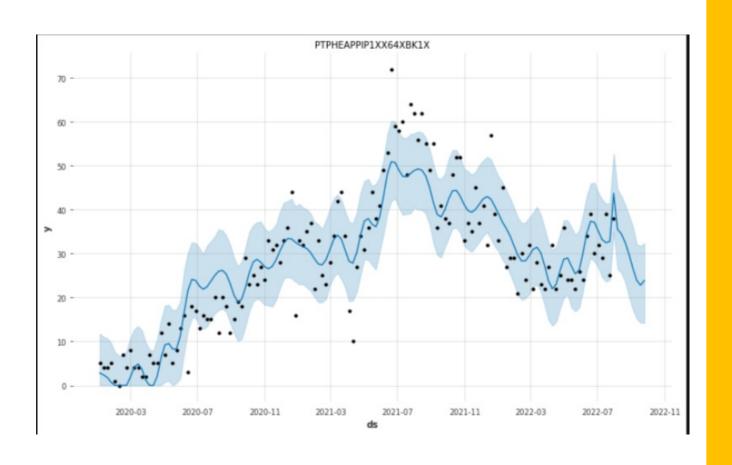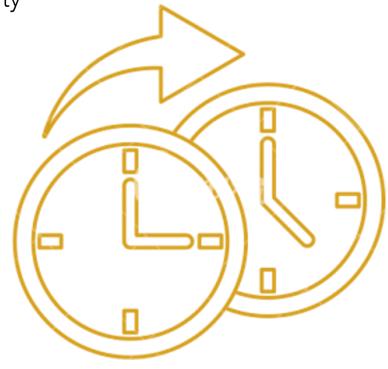 important features

Customer Churn by Contract Type

Features that put customers to low risk

Features that put customers at medium risk

Features that put customers at high risk

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Claims Prediction

- Replacement of human guesses, with forecasting algorithms.

- 50% + Improvement over human guessing.
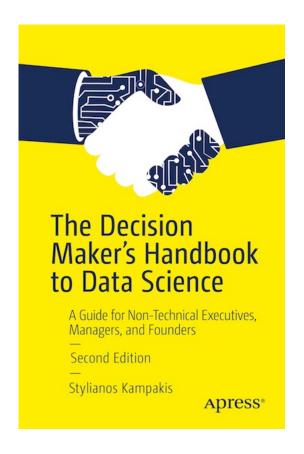

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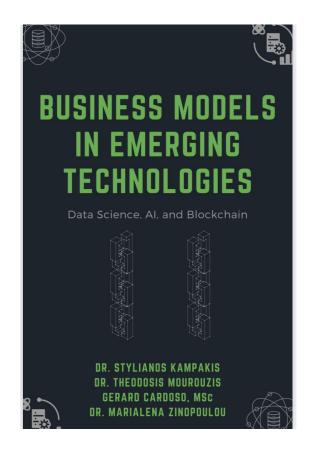
Our experience Summary

- Around 3-6 months to start seeing results from investment in AI

- Around 9-12 months to reach the first stage of maturity

- ROI is very problem and industry specific

- B2C can be very different to B2B

- Culture is key

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Further Readings

https://tesseract.academy/tesseract-report-customer-predicting-churn-through-data-science-and-ai/

https://thedatascientist.com/customer-churn-machine-learning-data-science-survival-analysis/