UNIVERSITEIT GENT

FACULTY OF **ENGINEERING AND ARCHITECTURE**

Design of a diagnosis and follow-up platform for patients with chronic headaches

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Faculty of Engineering and Architecture

Intro

Platform requirements

Mobile application

Backend and data exposure

Machine learning - decision trees

Genetic merging of decision trees

Visualization - doctor dashboard

Conclusion & future work

Fylogenie verschilt

- $\neq$ fylogenie bomen voor hetzelfde door:
  - Verschillende data
  - Verschillende modelen
  - Verschillende algoritmes
  - ...

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Backend and data exposure

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Conclusion & future work

Intro

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Mobile application

Backend and data exposure

Machine learning - decision trees

Genetic merging of decision trees

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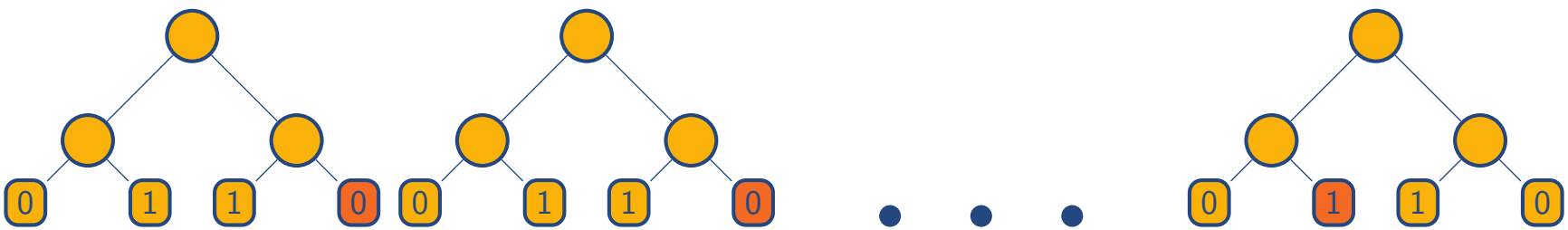
Many different induction algorithms

- QUEST
- CART
- C4.5 (C5.0)
- ...

→ **Which one is the best?**

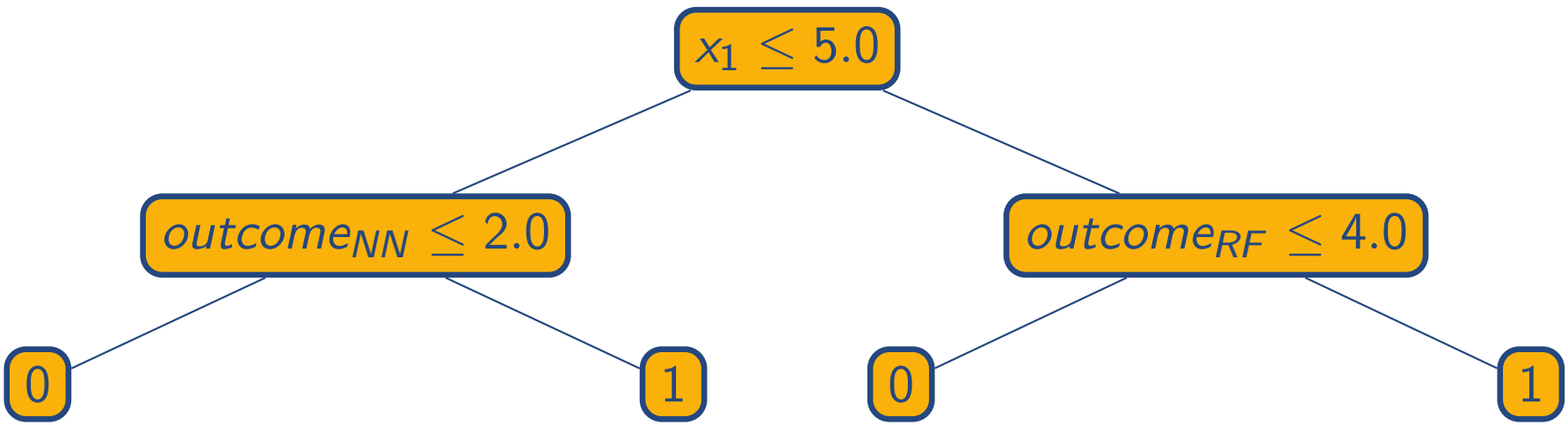
Current ensembles lack interpretability

Boosting, bagging, random forests, etc. require majority voting (classification) or mean calculation (regression) to obtain prediction



Current ensembles lack interpretability

The final decision tree obtained by **stacking** contains uninterpretable internal nodes



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Bedankt

Bedank voor uw aandacht

No written word,
No spoken plea,
Can teach the youth what they should be,
Nor all the books on all the shelves,
It's what the teachers are themselves

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