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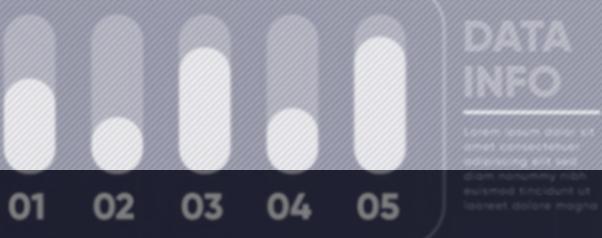
02

DATA
INFO

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04



Correlation analysis of biological data during aging

Sara Picó
EDA

Data Science | The Bridge



DATA INFO

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Current problems in society



“I want a healthy lifestyle for my wellbeing and longevity.
How can I achieve this?”

Current problems in society

“I want to acquire and maintain clients through more innovative services”



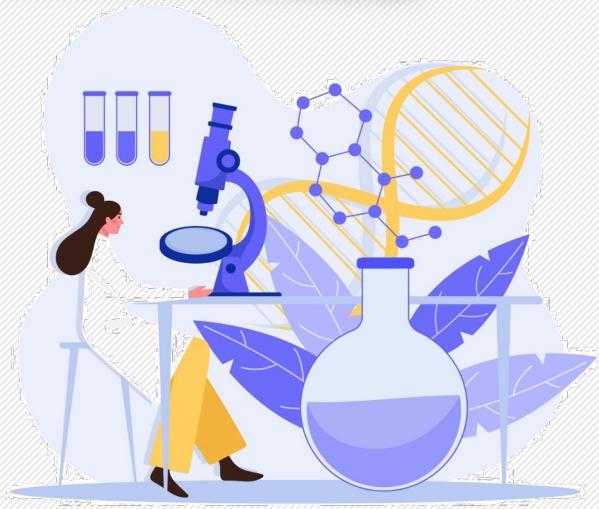
Not enough personalized solutions



Inaccurate
appsc

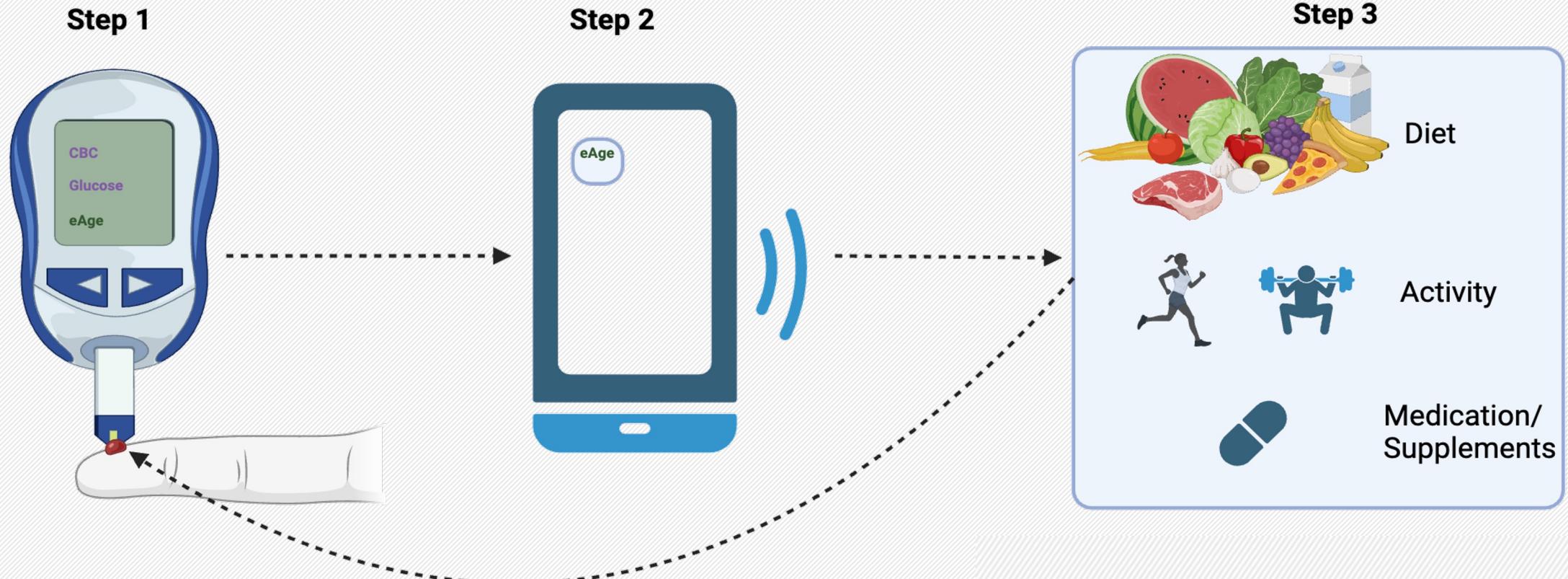


Not related to aging



Not science based

Our solution: eAge



Re-check after intervention

Data Scientist needed!

Before creating the algorithm, **correlation data of age and biological markers** is needed.

Fortunately, our co-founder, Sara Picó, is trained in Data Science.



A bit of the EDA

- Age (main)



- Gender



- Age group

A bit of the EDA

- Age (main)



- Gender



- Age group

- High blood pressure



- Diabetes

- Cancer



- Lung disease

- Heart condition

- Stroke



- Psychiatric problems

- Dementia

- Cholesterol



A bit of the EDA

- Age (main)



- Gender



- Age group



- High blood pressure



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- Psychiatric problems

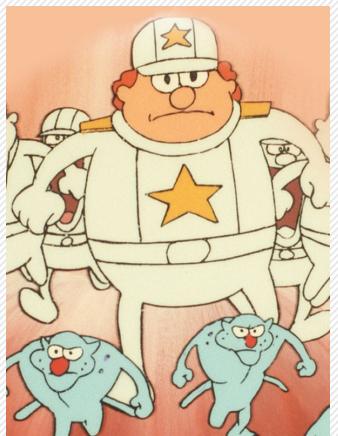
- Dementia

- Cholesterol

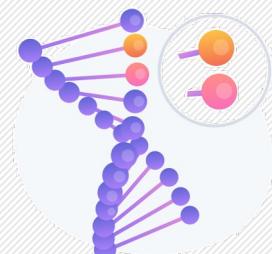
Correlation
with biological markers



Blood test



Immune cells

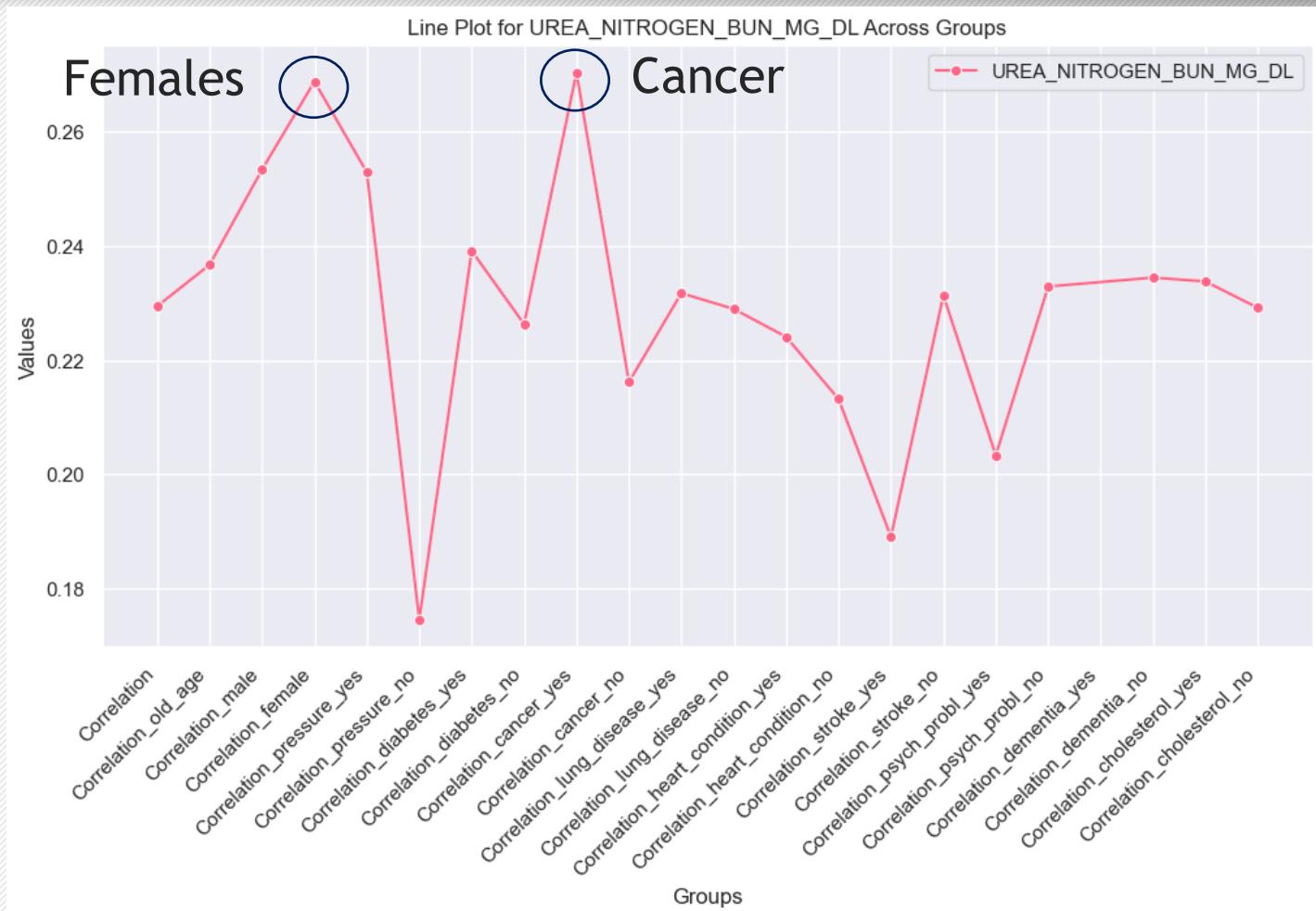


Other
parameters

Results

All correlations > 0.15 or < -0.15 were statistically significant.
Decided to work with > 0.25 or > -0.25 .

Example:



Results

Good biomarkers for aging:

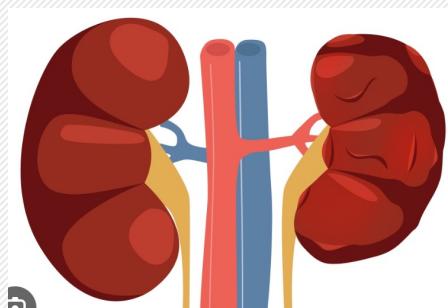
Decrease

Alanine
aminotransferase



Decrease

Urea
nitrogen

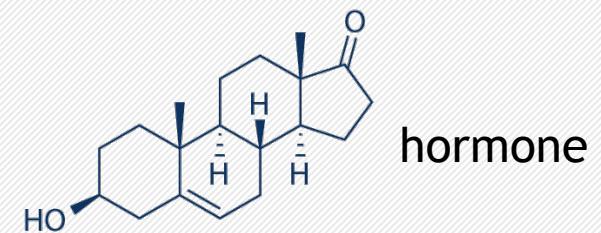


Increase

Cystatin C

Increase

DHEA
(Dehydroepiandrosterone)



Specially in:
Cancer
Dementia

Specially in:
Females
Cancer

Specially in:
Cancer

Specially in:
Old people
Stroke
Cholesterol

The surprise: dementia



Immune system affected!

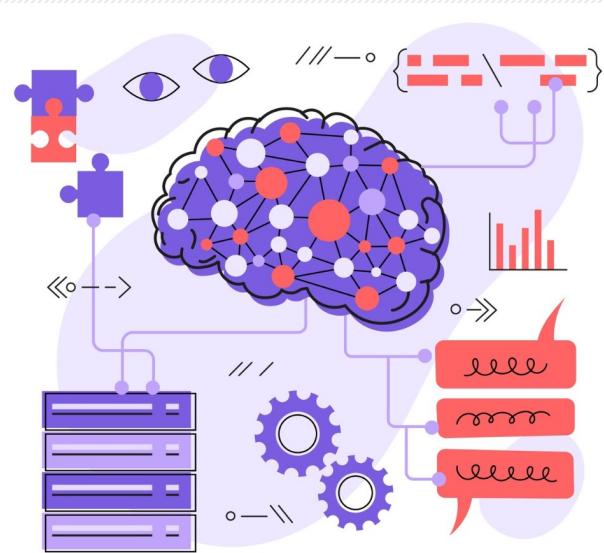
- Increased size of red blood cells
- Decrease no. Red blood cells
- Decrease no. T cells
- Decrease no. CD4 T cells
- Decrease no. CD8 cells
- Decrease no. TGF beta

Future perspectives

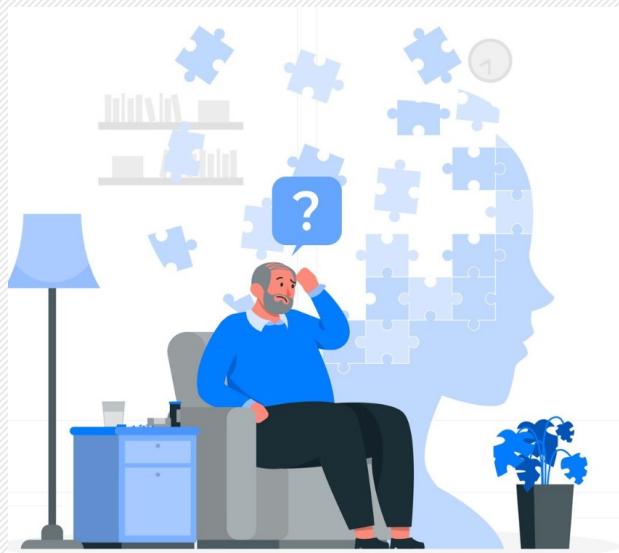
Implement the device for the selected biomarkers



Create algorithm using these 4 biomarkers



Case study for a new possible dementia biomarker



Thank you!