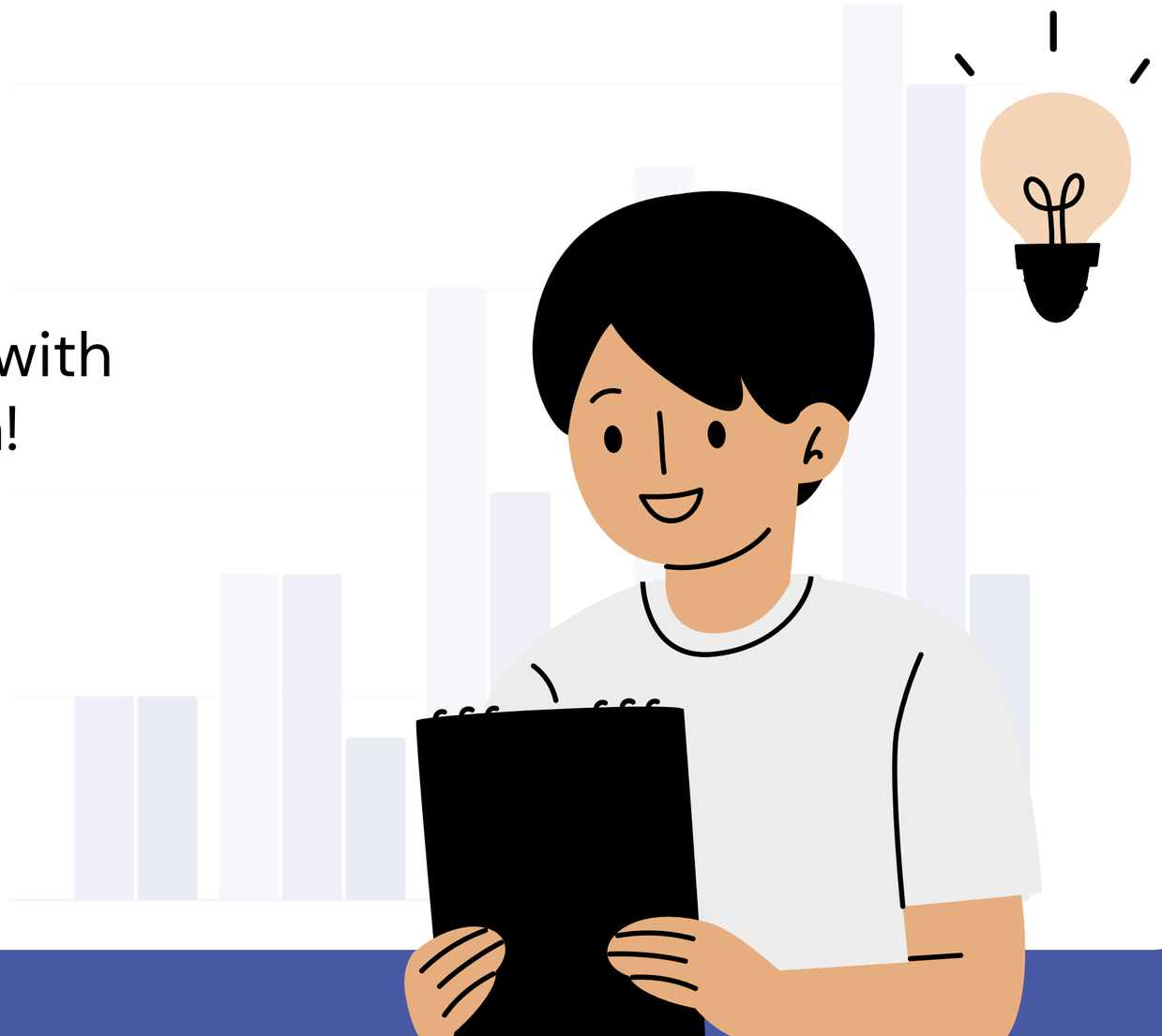
SCI LABS

Advancing physics education with the power of sensors and data!

Find out more →



Problem

- Data is 21 century gold and school curriculum does not reflect on it
- Teaching mathematical formulas in physics based on pure memorisation
- Intuition on vectors
- Physics classes not interactive enough
- No data available from experiments on classical mechanics

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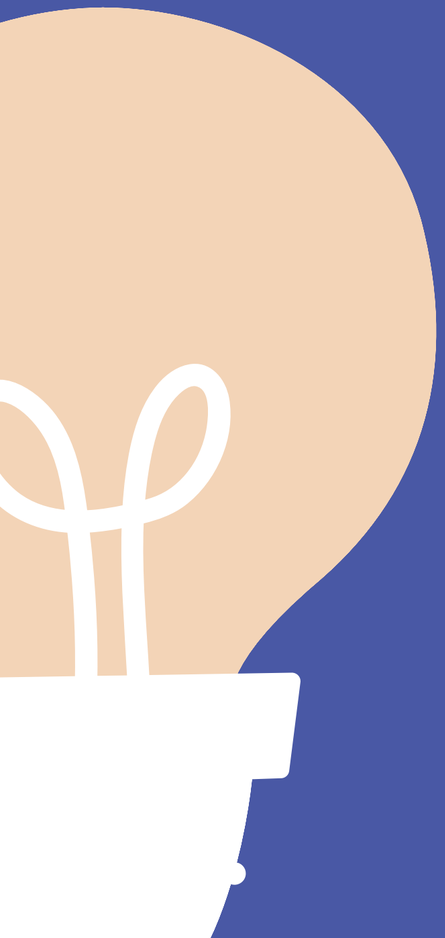
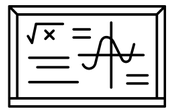
Solution



1.



Visualisation of relationships in physics

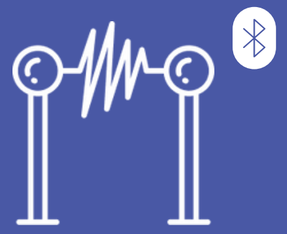
2.

Collecting data from experiments for further analytics

3.

Intuition based approach to physics education and introduction into data analytics

Our Product

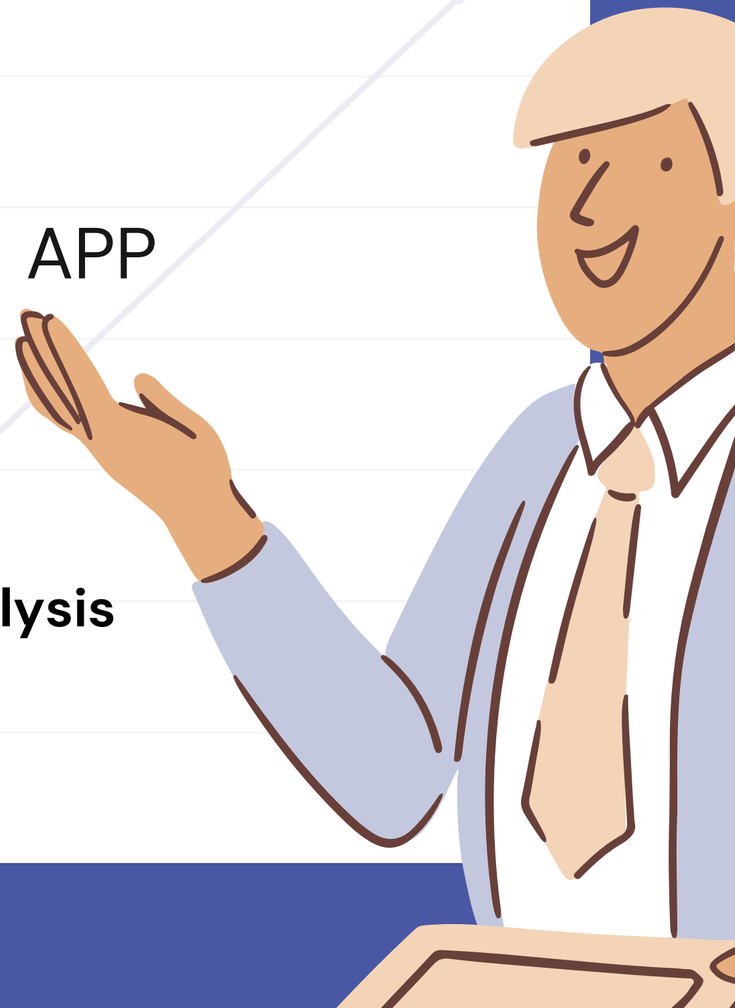


Experiment
+ Senzor →

Bluetooth
data stream →

SCI LABS APP

1. Live visualisation
2. Data export and analysis in python, excel.



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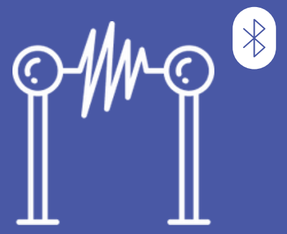

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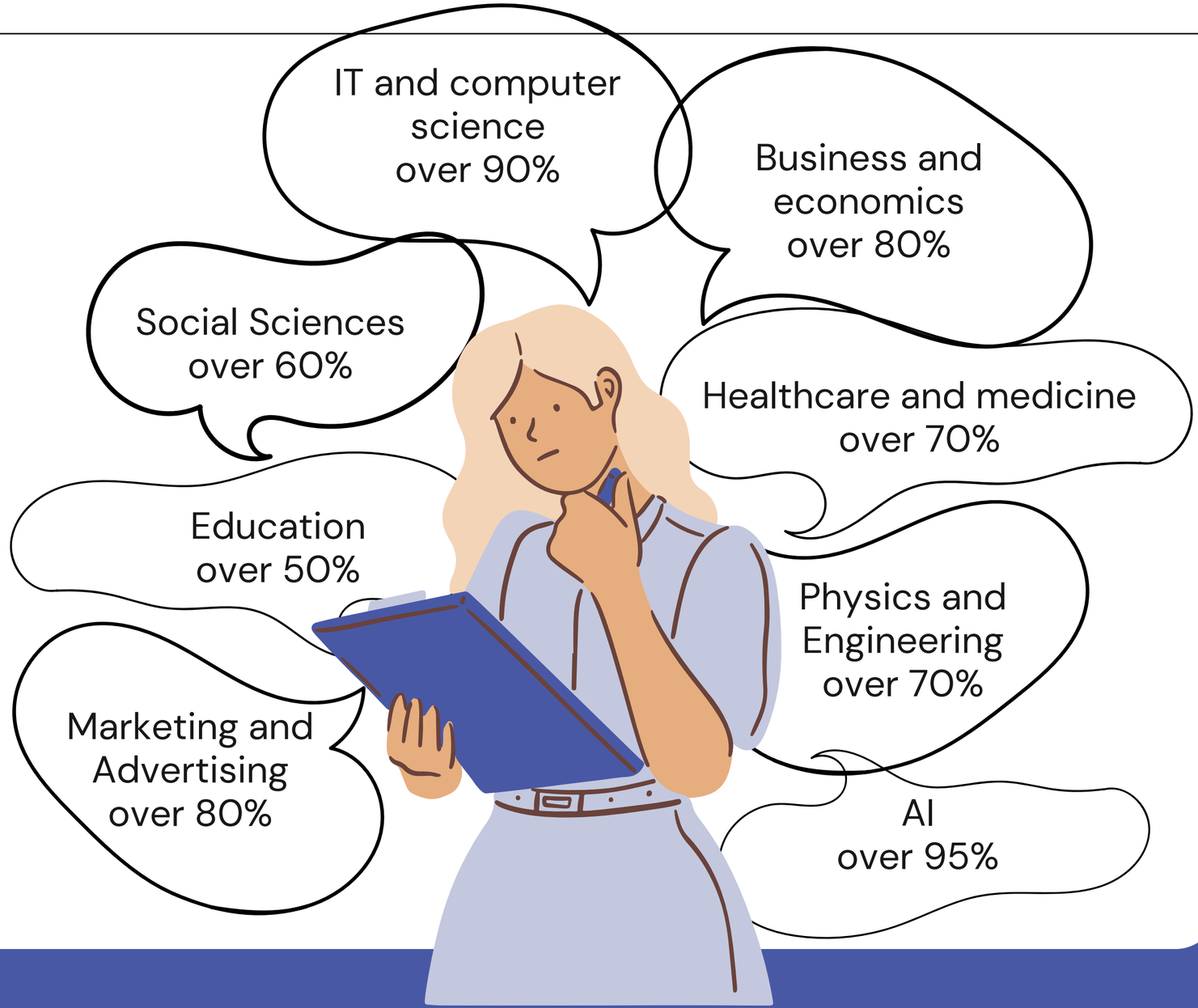
Building intuition on data analytics

How important is the data analytics in real professions?



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Students' benefits

Visual understanding

Visualization of data from experiments helps develop an understanding of abstract physics principles

Data literacy

Through collecting and further analyzing data students learn how to interpret and work with it effectively

Critical thinking Skills

As students analyze data, work with the results and connect different concepts and applications they develop critical thinking

Motivation and engagement

The use of new ways in the classroom makes the experience more interactive and captivating, thus making it more engaging for students

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Teachers' benefits

Improved teaching materials

Access to dynamic and visually captivating teaching materials, which can help explain complex concepts with real-world examples

Time efficiency

Possibility of saving time with quicker data collection allowing teachers more focus on analysis and discussions

Increased motivation for students

More interactive nature of the lessons can boost the classroom motivation making it easier for teachers to engage with the students

Power of visual learning

- A study shows that after three days of learning new information, users remember only 10-20% of what they learn through text or voice but retain **65% of what they learn visually**
- Helps **store information longer** - images are processed by our long-term memory
- **90% of all information** transmitted to the brain is visual

Our experi-ment bundle

+ your experiments and your creativity!

Mechanical pendulum

Physics: Gravitational potential energy, conservation of mechanical energy

- Body with sensor holder suspended from a fixed support
- Variable length and weight holder

Electromagnetism pad

Physics: Electric and magnetic fields, vector magnitude

- Magnets and sensor placement pad

Centrifuge

Physics: Angular velocity, centrifugal force

- Revolving arm with sensor placement
- Powered by electrical engine
- Variable distance from center of rotation

Light absorption box

Physics: Optical density based on color, temperature

- 4 boxes of different colors
- Measuring temperature rise inside of the boxes under sun or artificial light