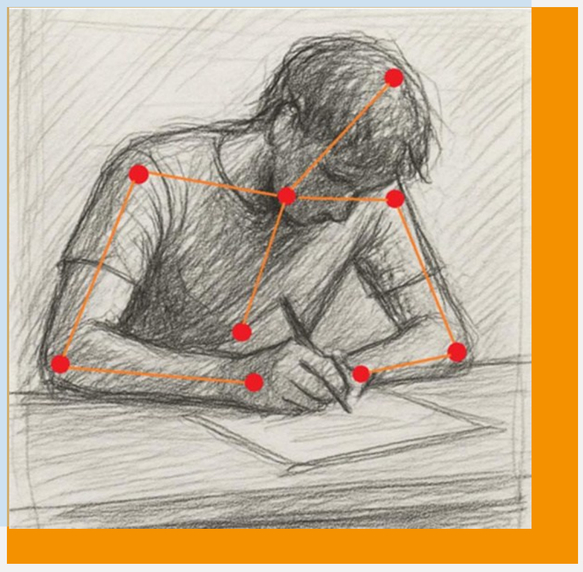
Technische Hochschule **Rosenheim**

TUM Healthy Spine-ML System



Motivation

- To reduce health issues related to back pain by improving adults' sitting posture through AI-based analysis.

Goals

- Develop a mobile app that encourages healthier sitting habits.
- Provide therapists with an easy-to-use tool to collect and label posture-related camera data for further analysis.

Challenges

- Limited availability of reliable, labeled posture data
- Legal and ethical concerns regarding copyright and data privacy when using camera-based recordings.

Results

- A binary classification model integrated into a Flutter mobile app, capable of detecting healthy vs. unhealthy sitting posture in real-time.
- A multi-class model running on a desktop PC, able to distinguish between five different sitting positions for more detailed analysis.