Welcome!

MATLABthon Introduction

Politecnico di Milano

Problem Statement

- Using **sensor data retrieved from your phone** to create a model to **turn this data into useable results**
- E.g., inform someone about how effective their workout was: calories burned, steps taken, or flights climbed
- E.g., real-time data visualizer with graphs
- Figure out **what information you want to output** but also how to make a model to output this information.

Sensors:

- **Acceleration (m/s^2)**
- **GPS Position**
  - **Latitude (degrees)**
  - **Longitude (degrees)**
  - **Speed (m/s)**
  - **Altitude (m)**
- **Course/Heading (degrees)**
- **Horizontal Accuracy (m)**
- **Orientation (degrees)**
- **Angular Velocity (rad/s)**

Agenda

9:15/30: Welcome Presentation

9:30/45: Participants form teams, develop solutions

13:45: Participants submit projects + demos

14:00: End of hackathon

Submission Guidelines

- Projects must be submitted to DevPost
- Submissions are due by 13:45 (14:00)
  - Submissions may be submitted before, but not after, this time.
- Submissions must be a public GitHub repository containing your team's project
- Only one submission per team is required

Judging

Fitness Tracker MATLAB Model	Points (70)
Creativity - Innovative, creative, and original work	10
Difficulty and Mastery - Level of MATLAB knowledge demonstrated in executing the tasks	10
Functionality - Error-free and runs without issues	10
Readability - Clean, organized, and easy to comprehend	10
Data Visualization - Clear and insightful graphics	10
Model Making - Transitioned between model ideas into a viable model implementation	10
Advanced Model Making - Use of Machine or Deep Learning Techniques in model	10

Technical Resources for Participants

- GitHub repository:
  https://github.com/matlabpolimi/matlab-mobile-fitness-tracker
- Devpost link (sign up now!):
  https://matlabthon-polimi.devpost.com
- Telegram group:
  https://t.me/+K6pEL0C9EAgwODA0

Questions?