



## Team: *Bathroom Pro 2000*

Team Members: Michael Leitner, Philip Rockenschaub

### 1. Progress report

Achieved since the Introduction Lecture :

- Setup Deepcraft
  - Create model project
  - Create data acquisition project
    - First data recordings (testing)
- Set up ESP C8 with homeassistant
  - Sensor gets recognized

Activities planned until next meeting:

- Gather data and classify
- Connect esp c8 with psoc6

Issues / Support needed

- Audio + Pressure data enough streaming capacity? Doesn't work sometimes

Problems we encountered:

- ESP C8 flashing because we didn't read docs :)



## 2. Progress report

### Achieved since last meeting:

- Integrated C8 and PSOC
  - Psoc → (gpio) → c8 → (zigbee) → HomeAssistant
- Preprocessing pipeline
  - Audio: MEL, sliding windows, etc.
  - Pressure: std, sliding window
  - Concat
- Data collection:
  - Lots of toothbrushing
  - Negative data
- Resolved streaming issue
  - System fault on our side

### Activities planned until next meeting

- More focus on data collection
  - showering
  - hair drying
- Training of first models for all labels
  - (not just brushing teeth)

### Issues / Support needed

- Smooth sailing atm and on track



## 3. Progress report

### Achieved since last meeting:

- Collect more training data
  - Improved labeling for old dataset
- Created model preprocessing pipeline
- Trained first model
  - Accuracy: 73.92%
- Switched Model Parameters

### Activities planned until next meeting

- Improve the model for better accuracy
  - Through more training data
- Deploy Model to PSOC6
  - Deployment
  - Integration Testing

### Issues / Support needed

- Running smooth over here

# Infineon PSOC6 Lecture presentation and final submission plans

Short project presentation:

- how we got to the result
- short demo
  - lots of local infrastructure so it's difficult (zigbee network, homeassistant, no shower :D)
- show the code and preprocessing

Any special equipment need for demo at the demo Day ?

no