

Northeastern University London

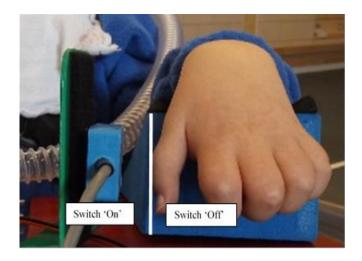
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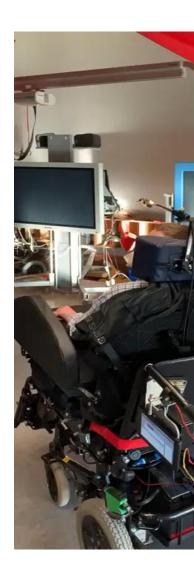
Dr Malik Haddad

### Contents

- Published Work
- Work/Research in Progress
- Future work
- Questions & Comments

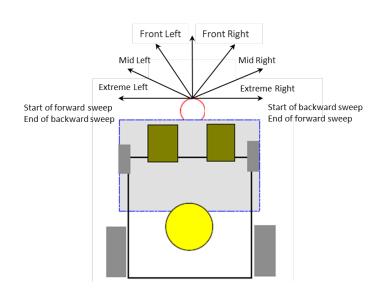
- Intelligent Input Devices
- ✓ Python & Microcomputer



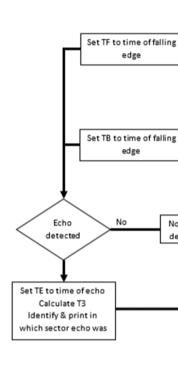


Using AI to Improve the quality of Life of p

- Digital Scanning Collision Avoidance Device (SCAD)
- ✓ Python
- ✓ 2 modes of operation: Stop & Avoid

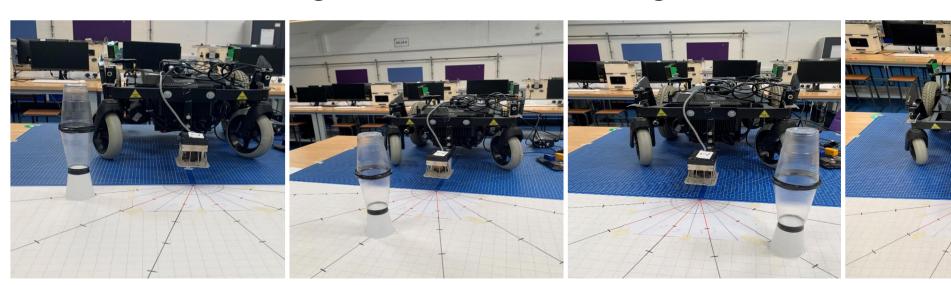


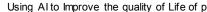




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- Smart SCAD
- ✓ Python & Microcomputer
- ✓ Machine learning → Classification algorithms



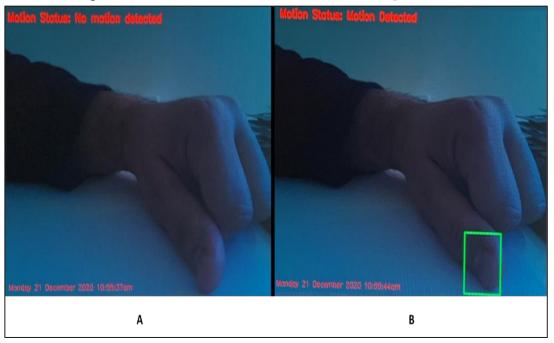


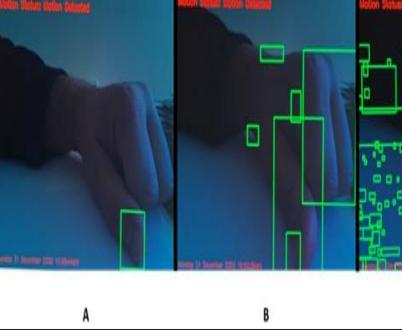
Extreme Left

Start of forward sweep End of backward sweep

## Small movement detection using Computer Vision

✓ Python & Microcomputer

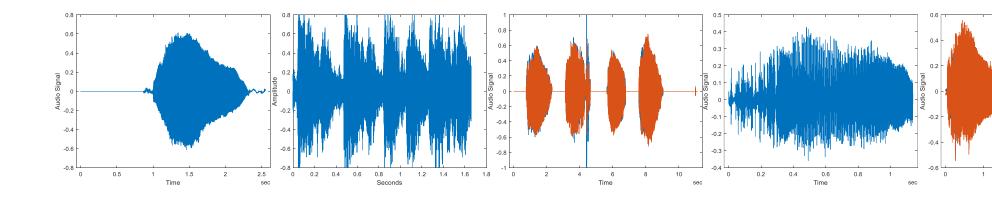




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## Work/Research in Progress

## Voice recognition



## Work/Research in Progress

Voice recognition



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## Work/Research in Progress

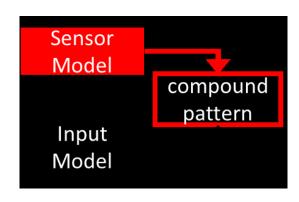
Computer Vision to identify shared power mobility platform



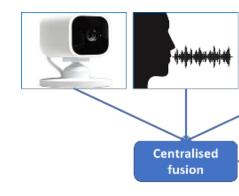


#### **Future Work**

- Intelligent Input Devices: Computer Vision, NLP &
- EEG helmet
- Sensor Fusion
- Compound Pattern
- Include Biosensors







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# Questions & Comments











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