How do Multi-disciplinary Students and Colleagues Engage in Engineering Inclusive Projects in Community Service?

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Our campus
Our student body
How do the engineering students apply the engineering knowledge into community projects?

- Project design with appropriate technologies
1. Transition Effects

2. For elderly people with Alzheimer's disease at early stage

3. Provide Cognitive Therapy

Embedded Cognitive Therapy in Digital Photo Frame
Engineering students

Braille Embosser

1. Word File
2. PC1
3. Plain Text
4. PC2
5. Braille
6. Braille embosser

File Import

Print
Students’ reflective statements

- Another way of learning
- Learn more hardware skill
- Learn how to manage a project
- Learn a lot from other teams (including technologies and presentation skills)
- Gain recognition from their peers.
- Increase sense of belonging to the department and university.
- Think more about what an engineer’s responsibility to the society is, and what they can really do to make the world better.
• Working with single disciplinary
  – Understand the user behaviors
  – Pick appropriate technologies

• Working with multi-disciplinary, more challenges....
  – Different background
  – Expectation of participants
  – Their role in the projects
  – Learning outcomes
Multi-disciplinary inclusive projects

Develop empathy and contribute to the society

Apps for hearing impaired children

- Research Work
- Apps developers for system and design
- UI design
- Apps developers for voice recording
- Speech collection at primary schools

A collaboration between undergraduate, postgraduate students, faculty and alumni

Underwater robot community engagement project

Apprentices trained to be the mentors for visually impaired, hearing impaired, learning disabilities, ethnic-minority and normal students
Multi-disciplinary inclusive projects

- Mobile app development for learning words (listening and speaking)

Technical development (UG level)
- Apps developers for system and design
- UI design
- Apps developers for voice recording
- Speech collection at primary / secondary schools

Research Work
- Research faculty + PG students

Apps developers for system and design
- UI design

Senior UG students

Junior UG students

Speech therapists

Multi-disciplinary students + service learning + Primary / Secondary schools
Multi-disciplinary inclusive projects

- Underwater robot community engagement project
  - 8 colleagues from 5 units (Engineering, Business, Science, Humanity, Inter-disciplinary Program office)
  - 27 UG students (Engineering, Business and Science)
  - 18 student teams (primary 4 to secondary 3, visually impaired, hearing impaired, learning disabilities, ethnic-minority and normal students)
Underwater robot community engagement project
Thank you.