

SEMET Technical Project Showcase - Winter 2025

Version 10

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The following electronics, computer engineering, and electromechanical automation projects are anticipated to be shown at the SEMET Technical Project Showcase on Wednesday, April 16, 2025.

- See photos from the event (TBA).

TPJ452: EEN Program

- L01. [Dual-Mode Communication Device - Walkie-Talkie and Morse Code Interface](#) - Chun T. & Yetao H.
- L02. [Automatic Pet Feeder with Food Stealing Prevention System](#) - Pouria N. & Man L.
- L03. [IoT-Based Smart Exhaust Fan for Indoor Environmental Management](#) - Noel V. & Kyle P.
- L04. [Smart Parking Lot System](#) - Kin C. & Hnin A.

TPJ655: Joint EET & ECT Programs

- V01. [A.R.M.S. - Assistive Robotic Meal System](#) - Alexis S. & Rayyan P.
- V02. [Avarista: Brewed to Perfection](#) - Quynh N. & Kristian Z.
- V03. [Smart Dumbbell](#) - Jasroop P. & Joshua N.
- V04. [Hexapod Automated Lookout \(H.A.L.\)](#) - Rafael C. & Gianni C.
- V05. [ScreenSpeeder: Navigational Controller for the Visually Impaired](#) - Adam B. & Sam D.
- V06. [DeskIQ: IoT-Automated Workstation](#) - Abrar S. & Shahan F.
- V07. [Smart Helmet for Miners & Construction Workers](#) - Anish K. & Smit P.
- V08. [Wearable Stress Monitor](#) - Run Ze L. & Mahta N.

- V09. **R2D2: AI Assistant Robot** - Meet K. & Himghna D.
- V10. **MediMate: Smart Medication Assistant** - Alen B. & Thisal K.
- V11. **Brain Cap: Electronic Charades** - Govind S. & Vo W.
- V12. **Buddy Bot: A Robotic Friend for Kids** - Abhishek K. & Sujal P.
- V13. **Smart Desk System** - Ebenezer S. & Sona S.
- V14. **IoT Saber** - Wooseok Y.
- V15. **Bay Med: Automated Health Assistant** - Bhaskar N. & Thant T.
- V16. **Wearable Glove Mouse** - Jinhan & Reese D.
- V17. **Safe Step Stick** - Suwethika L. & Eunwoo C.
- V18. **Interactive Boardgame Controller with AI Opponent: Connect4** - Olutayo B. & Khanh H.

TPJ653: EMA Program

- H01. **Material Classification-Marking Station** - Guanzhong D. & Iman A.
- H02. **Automated Palletizer** - John B. & Aswathy S.
- H03. **Automated Can Crusher** - Kazi S. & Wasek C.
- H05. **Screw Sorting System** - Derrick J. & Vihara M.
- H06. **CrunchCraft** - Anikait G. & Christine C.

What is TPJ?

"TPJ" is the Thesis Project (or capstone project) course in each of the final semesters of our EEN, EET, ECT, and EMA programs. Each student project team above spent 12 weeks researching, designing, and constructing a working capstone project, with guidance from their respective TPJ professors:

Jason Wang (452), Karen Craigs (655), and Fabio Costa (653).