Matas Manawakul

ROBOTICS ENGINEERING STUDENT

Work Experience

AVATAR XPRIZE - FIBO XPRIZE

| The competition that aims to create an avatar system that can transport human presence to a remote location in real time. |

- Hardware Architecture Team

  Avatar Head
  - Control Avatar Head by an operator with HTC VIVE with Inverse Kinematics and PID control

  Avatar Arm
  - Simulation to verify the optimization of Avatar Arm with Matlab

  Avatar Base
  - State Estimator of Z-axis gyroscope sensor in IMU sensor
  - low level control with Mbed OS for omnidirectional wheels

CATESIAN ROBOT CLASS PROJECT

| 4 DOF Cartesian Robot that can grab a rod and pass through a maze without touching the rails |

Robot modeling and Control
- DC motor modeling
- Parameters estimation of DC motor with Matlab/Simulink
- PID Control Diagram / PID Tuning
- Trajectory Planning

Image Processing
- Use OpenCV to Capture field and remove almost rails in the field
- Use Image Processing to enhance image to identify path for robot

For Matlabscipt, Code, Image :
https://github.com/KarnMatas/Learning-adventure.git

Education

BACHELER DEGREE 2018 - PRESENT

The Institute of Field Robotics (FIBO), KMUTT, Bangkok
GPAX : 3.56

HIGH SCHOOL 2012 - 2017

TakhliPrachasan School, Nakhon Sawan
GPAX : 3.97

Personal Profile

I am a third year student from The Institute of Field Robotics (FIBO), King Mongkut's University of Technology Thonburi. I am interested in Robotics especially Robot Modeling, Control and low-level programming.

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Notable Skills

- Low level control with c/c++ languague
- Can Implement in Matlab, Simulink and some toolboxes that related to robotics
- Intermediate python programming
- Intermediate speaking and writing English