

# AIML Assignment 3

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Q1 Design intelligent system using PEAS

1 Automated Taxi Driver

- Performance Measure: Safety, Rules & Regulations, Time, Comfort
- Environment: Roads, Other Cars, Signs, Pedestrians
- Actuators: Accelerator, Brake, Signal, Clutch, Horn
- Sensors: Camera, Sonar, Radar, GPS, Odometer, Accelerometer

2 Vacuum Cleaner Agent

- Performance Measure: Cleanliness, Efficiency, Distance Travelled, Power Consumption, Battery Usage
- Environment: Room, Table, Furniture, Obstacles, Carpet

- Actuators : Wheels, Different brushes, Vacuum extractor

- Sensors : Camera, Vacuum Pump, Infrared Sensor, Bump Sensor

### 3 Music Composer

- Performance Measure : Quality of Composition, Compositions per hour, Rhythm & Melody, Ease of Play by human

- Environment : Software

- Actuators : None

- Sensors : Music lines that it reads accordingly

### 4 Aircraft Autolander

- Performance Measure : Lack of damage to plane, Lack of injuries to crew and passengers, Fuel consumption, Correct airport & correct runway



- Environment: Ground, Airspace
- Actuators: Landing gear, Throttle, elevator, rudders, ailerons
- Sensors: Cameras, Air Pressure, Altimeter, Wind gauge & other meters

## 5 An Essay Evaluator

- Performance Measure: Quality, Impartiality, Verification of truth, identification of figure of speech & grammar
- Environment: Software
- Actuator: None
- Sensor: File Reading, User & UI gestures

## 6 A Robotic Sentry Gun for Keck Lab

- Performance Measure: Percent correct target hits, minimal energy consumption
- Environment: Keck Lab
- Actuators: Gun, trigger, motor

- Sensors : Camera , Sonar, bump sensors

## 7 Medical Diagnosis System

- Performance Measure : Healthy patient, minimum cost, quality of equipment, proper treatment
- Environment : Hospital
- Actuators : Screen display (with problems facing, medication required tests)
- Sensors : Keyboard (for entering the symptoms, findings, patient answers).