

GODDARD - DISCOVERY

Leveraging breakthrough scientific discoveries through AI

FOUNDER'S Statement

My motivation for the modern world lies within the context of Artificial General Intelligence. I believe that this technology will be the best and final invention of human beings that would change the entire world for good. The future industry would not rely much on human intervention in designing, developing, or testing new products or services, but our software "Inventia AI" will generate all the required essentials needed by the industry through linking experience and overall interdisciplinary expertise with minimal chance of error.

Goddard - Discovery is not just a product or a service, it is a revolution that will serve to enhance every field that does not fit the modern system using the knowledge and expertise of already developed methods and later combining the positive aspects of all.

Ammar Abbas

Founder of Goddard - Discovery

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About Company

Your Partner in AI-Powered Progress

Goddard-Discovery is a cutting-edge startup company that specializes in utilizing the power of artificial intelligence and machine learning to optimize research and development. At our core, we are a software provider and AI and mechatronics consultancy company that is dedicated to developing innovative solutions that solve complex problems. Our team is made up of the brightest minds in the industry, from AI and research and development to mechatronics. We help our clients achieving their goals and make a real difference in the world. We offer customized solutions that are tailored to meet the specific needs of each client, whether they are working in academia, any industry, or a company seeking to optimize operations. Our passion for innovation and commitment to excellence are the driving forces behind everything we do at Goddard-Discovery.



Business **Expertise**



Artificial Intelligence

We have a dedicated team of AI experts who are well-versed in the latest machine learning and natural language processing techniques. We offer a wide range of AI services.



Machine Learning

Our team has experience in developing and deploying custom machine learning models for a variety of industries.



Mechatronics Engineering

Our business possesses unparalleled expertise in mechatronics engineering, offering a comprehensive range of solutions at the intersection of mechanical, electrical, software engineering, and robotics.



Our Services



AI Projects



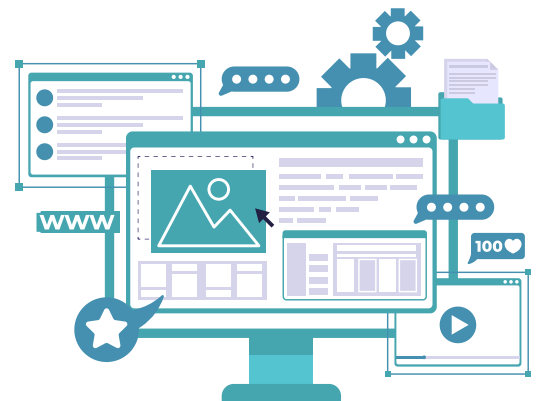
**AI and Mechatronics
Consultancy**



Mobile App Development



Web App Development





Our Services



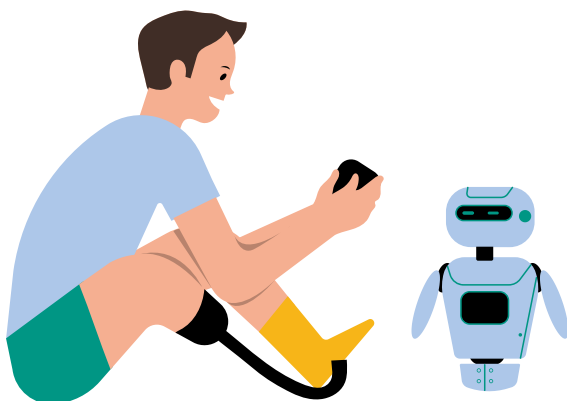
**Mechatronics System
Design & Development**



Research & Development



**Robotics & Automation
Solutions**



**Control System
Development**



How We Work

■ Technologies We Work On

- *Artificial Intelligence (AI) and Machine Learning (ML)*
- *Python*
- *Java Script*
- *Typescript*
- *Node Js*
- *iOS and Android*
- *.NET*

■ TechStacks

- *MERN Stack*
- *MEAN Stack*
- *JAM Stack*



Our Projects

■ **Project 01**

Quad-Copter

■ **Project 02**

Tri-Copter

■ **Project 03**

Fuel Efficient Car

■ **Project 04**

CAD/CAM

■ **Project 05**

*Computer Numeric Control
CNC*

■ **Project 06**

Assistive Technologies

■ **Project 07**

*Thermo-Acoustic
Refrigerator TAR*

■ **Project 08**

Speech Translation

■ **Project 09**

Control & Automation

■ **Project 10**

Autonomous Vehicles

■ **Project 11**

Stereo Vision

■ **Project 12**

Smart Helmet

■ **Project 13**

Smart Goal Keeper

■ **Project 14**

*Inspecting Mega Solar
Plants*

■ **Project 15**

*Solving Combinatorial
Problems*

■ **Project 16**

*Analysis of DL Algorithms
on Edge in Microscopic
Fabric Dataset*

■ **Project 17**

*Smart Surveillance
and Tracking System*

■ **Project 18**

Smart Goal Keeper



Our Projects

■ Project 19

*Desktop Application for
Sensory Data Analysis*

■ Project 20

*Computer Vision for
Anomaly Detection*

■ Project 21

*Real-time semantic
segmentation with
RGB-D camera*

■ Project 22

Real-time, vision-based automated indoor/outdoor docking of mobile robots (for charging) using YOLO-v7 and custom-prepared dataset using Roboflow

■ Project 19

A Study of Voluminous Healthcare Dataset For Data Engineering, Response Possibilities (Predictions) and model Benchmarking

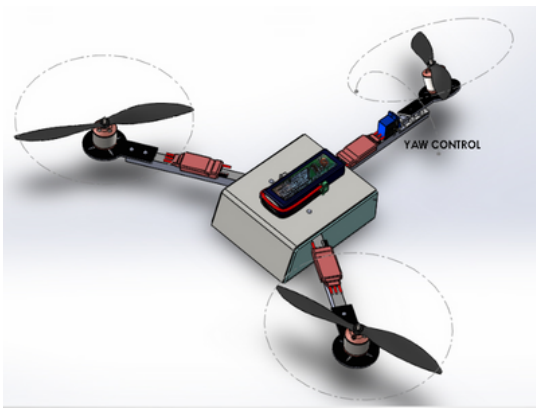


Our Projects

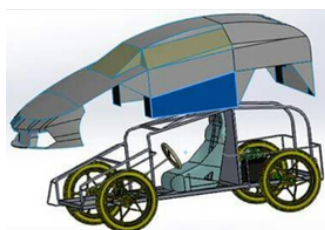
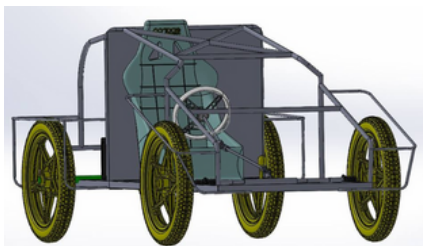
■ Quad-Copter Autonomous Navigation



■ Designing and Fabrication of an Economically Sound Tri-Copter



■ Designing and Fabrication of a Fuel Efficient Car

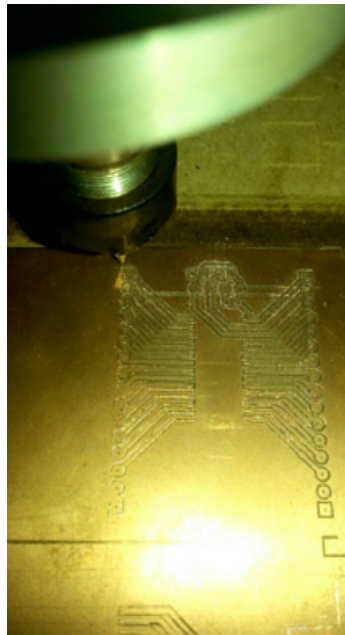
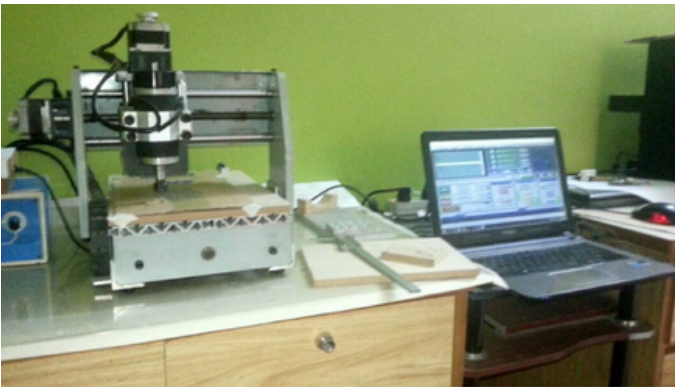


Our Projects

■ Customized Designing CAD/CAM

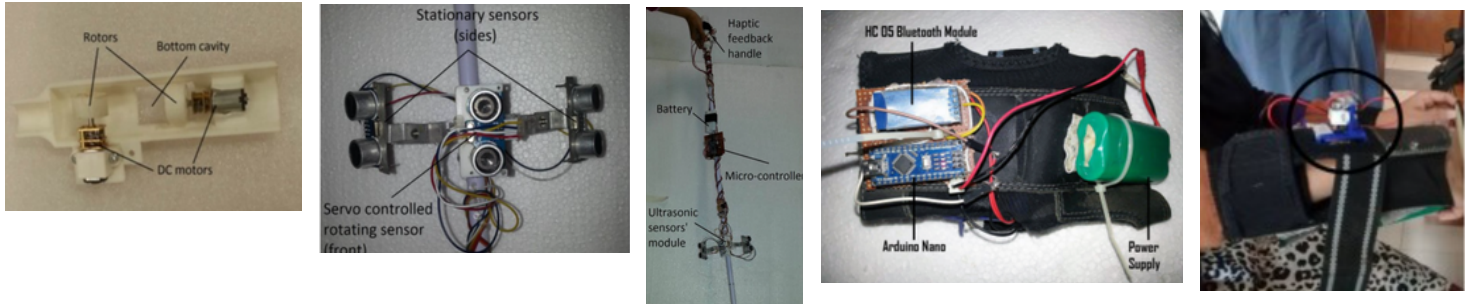


■ Computer Numeric Control

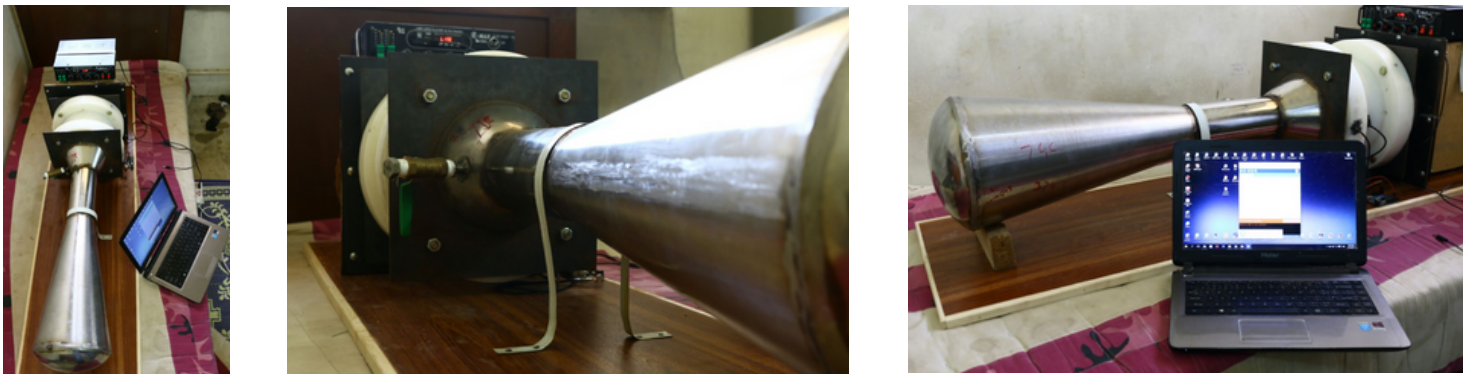


Our Projects

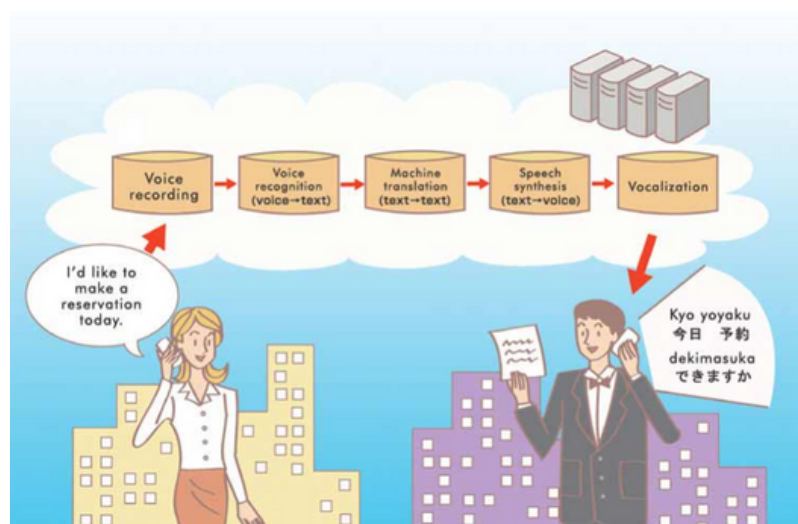
Assistive Technologies



Thermo-Acoustic Refrigerator (TAR)

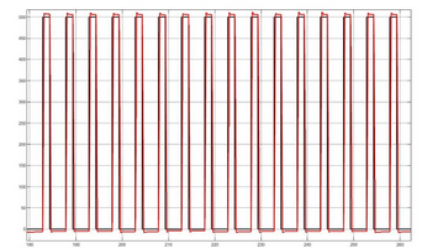
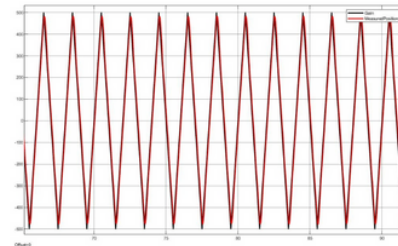
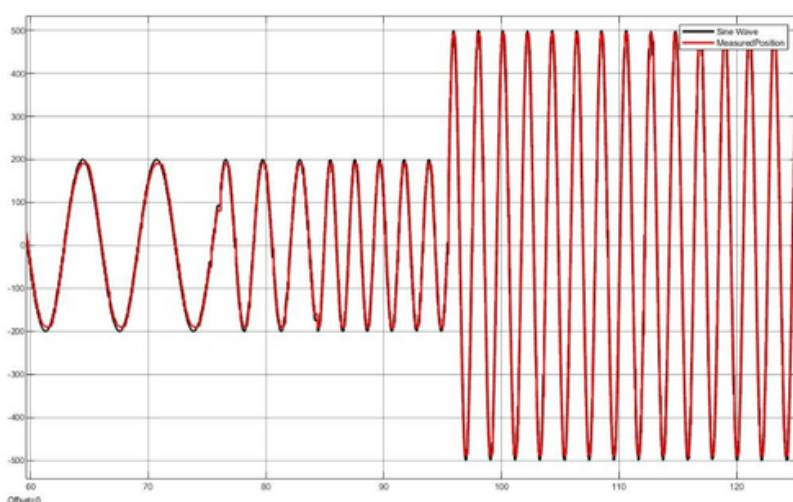
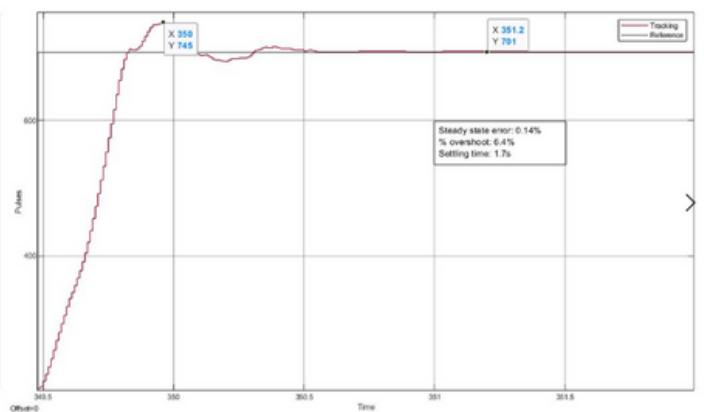
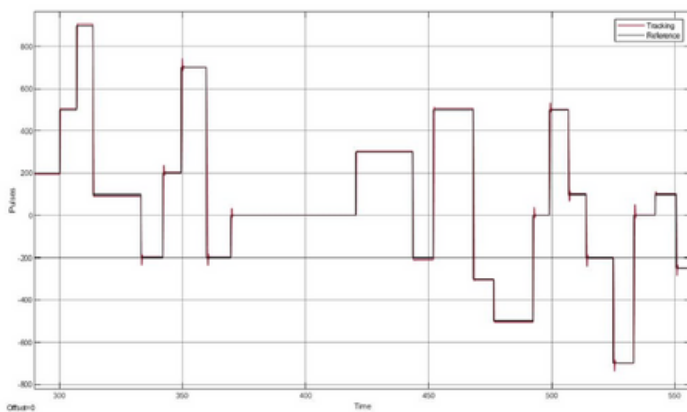
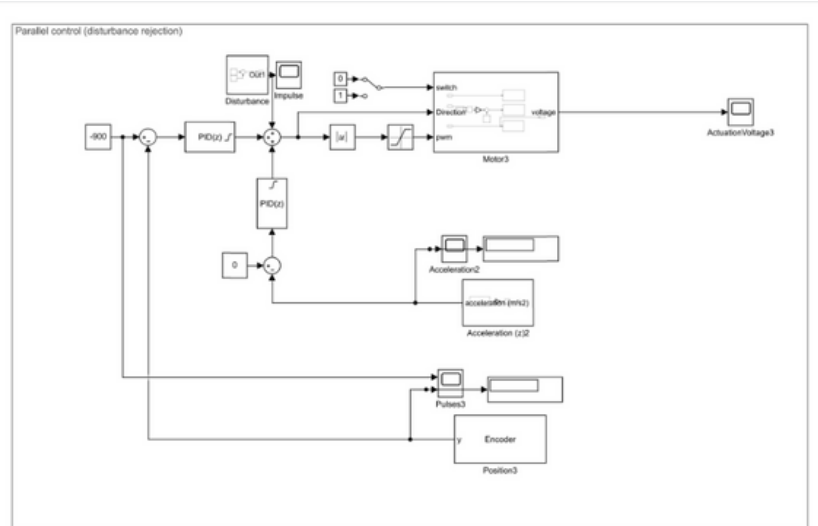
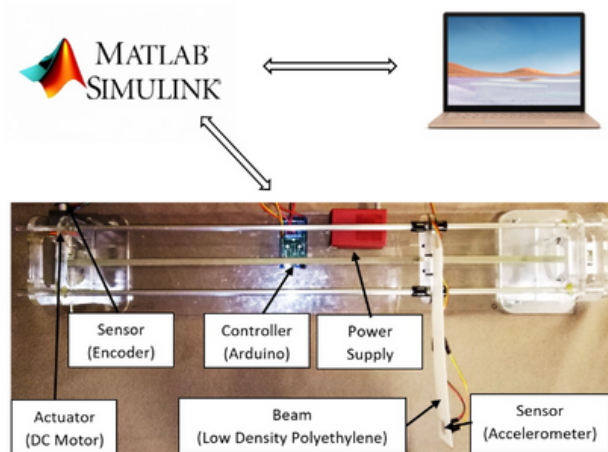


English To Urdu Speech Translation Using IBM Watson, Google, and WEB Socket



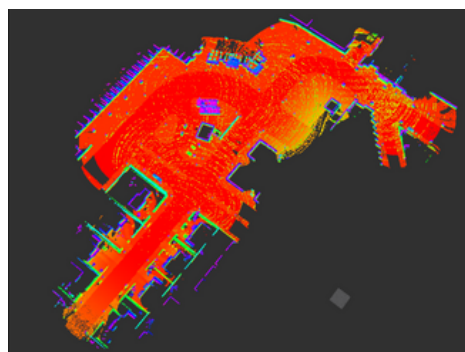
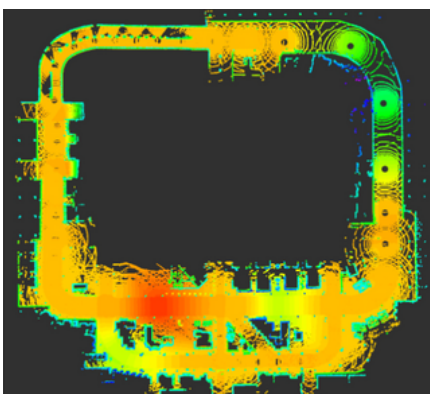
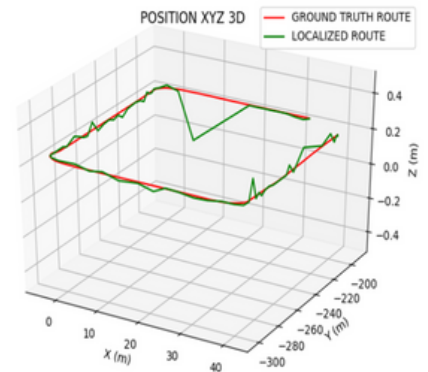
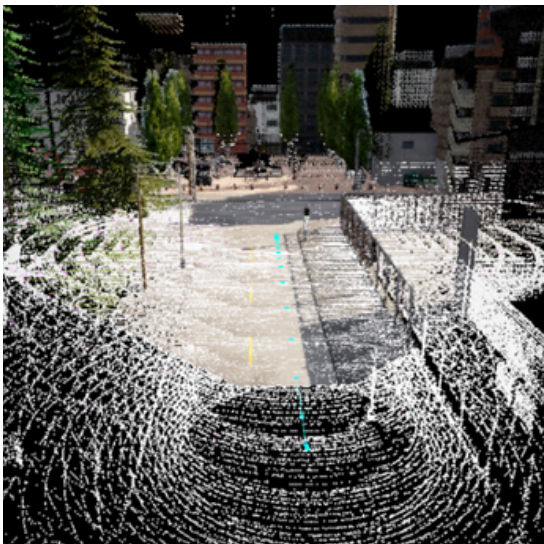
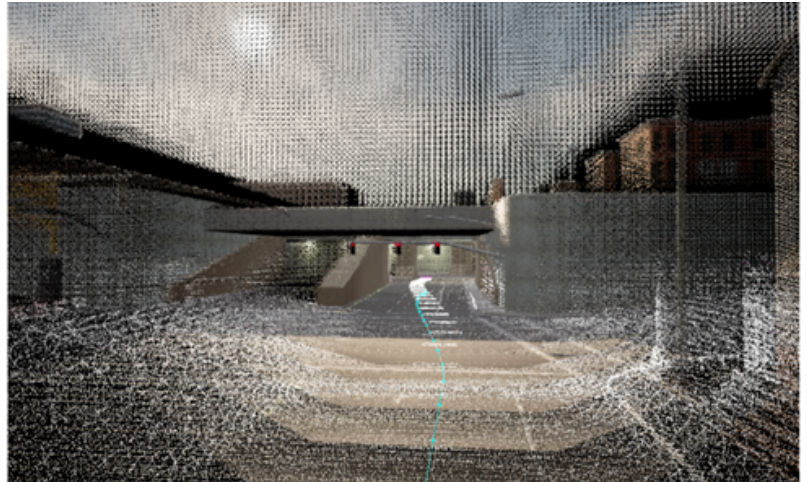
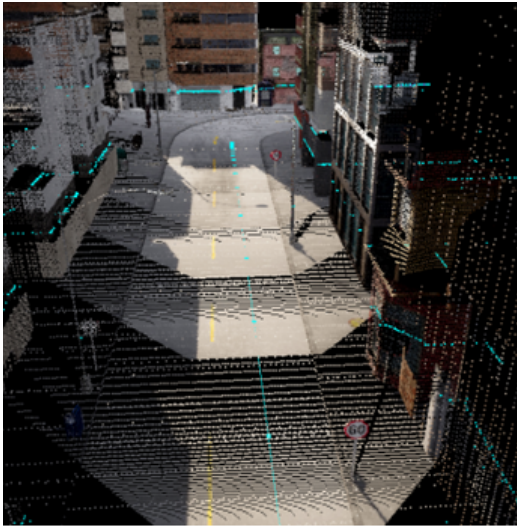
Our Projects

Parallel P-PD Controller To Achieve Vibration and Position Control of a Flexible Beam



Our Projects

Autonomous Vehicle Navigation Using HD Maps and Artificial Intelligence

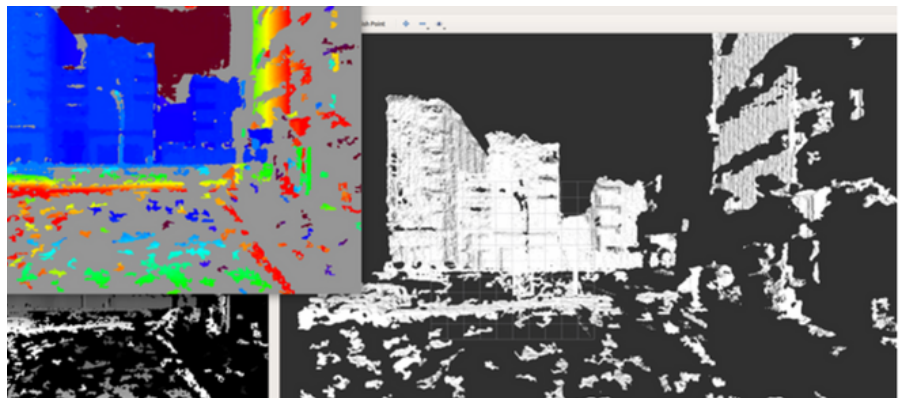
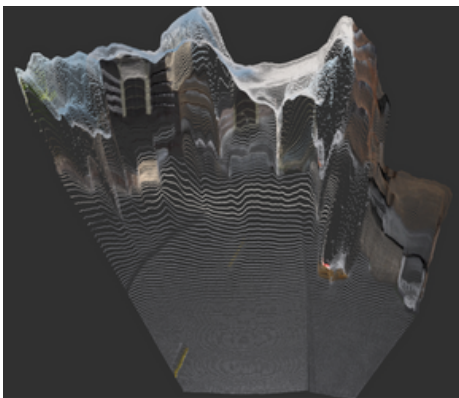
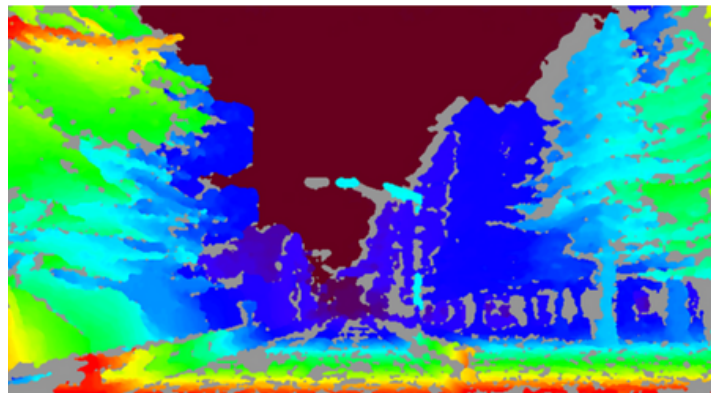
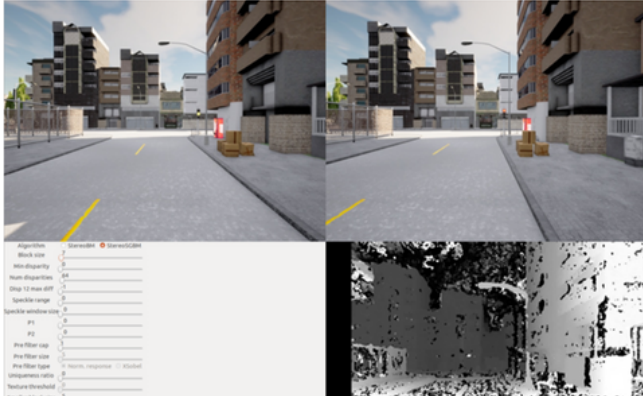
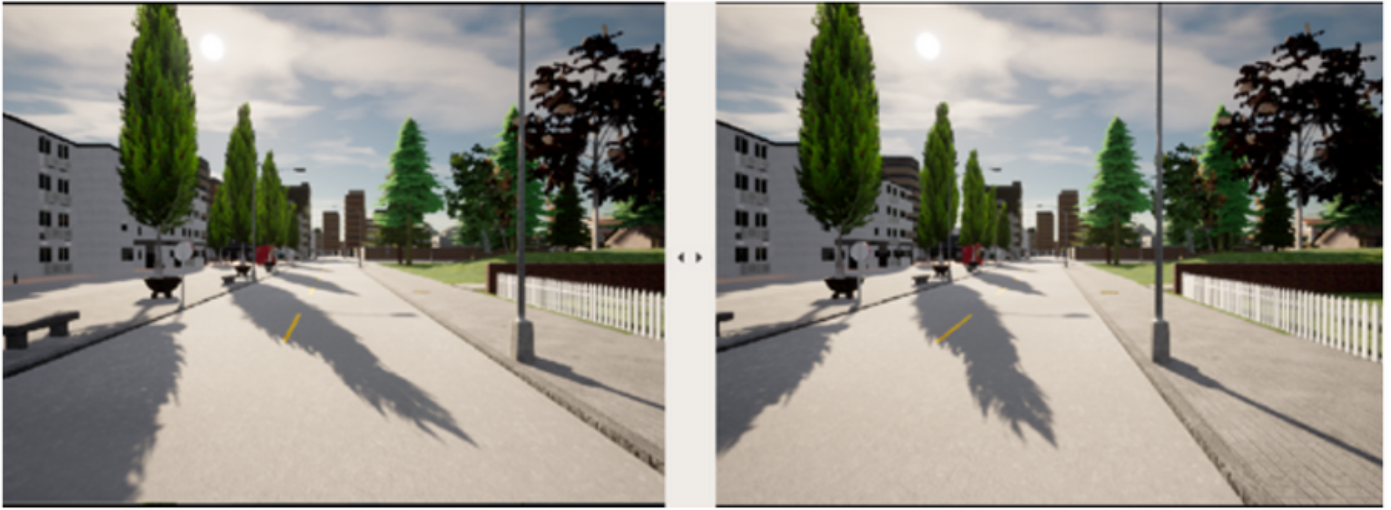


```

[200] [181520442:5791197: 443.70891140] | GridMap path: [12 13 14 15 16 17 18 19 20
11 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49
50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78
79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97]
warn: [181520442:5615131:3073] Finding appropriate previous rejected loop closure 12
-> M3: Not enough colliders 187/200 (radius=200) between 12 and 903
[200] [181520442:121842161: 443.36898126] | Publishing next goal: 14 -> xyz=0.0,0.0,0.0
[200] [181520442:121842161: 443.36898126] | rtatmp [64]: data=0.56, (lat=0.000,
rtatmp-Rep=0.3388, Reps updat=0.0175, jct=0.0013, (local map=0), wh=0)
[200] [181520442:40191904: 443.36898126] | Publishing next goal: 14 -> xyz=0.0,0.0,0.0
[200] [181520442:121842161: 443.36898126] | rtatmp [64]: data=0.56, (lat=0.000,
rtatmp-Rep=0.3388, Reps updat=0.0175, jct=0.0013, (local map=0), wh=0)
[200] [181520442:40191904: 443.36898126] | Publishing next goal: 14 -> xyz=0.0,0.0,0.0
[200] [181520442:121842161: 443.36898126] | rtatmp [64]: data=0.56, (lat=0.000,
rtatmp-Rep=0.3388, Reps updat=0.0175, jct=0.0013, (local map=0), wh=0)
warn: [181520442:1815131:3073] Finding appropriate previous rejected loop closure 12
-> M3: Not enough colliders 187/200 (radius=200) between 12 and 903
/home/psajjaj@psajjaj-robot:~/catkin_ws/src/navigation/launch/launch_navigation.launch $
File Edit View Search Terminal Help
line: 5
stanc:
  axis: 0
  radius: 0
  frame_id: ""
  throttle: 1.0
  steer: -0.0245588779417424
  speed: 0.5
  send brake: false
  reverse: false
  gear: 0
  sensor_gear_offset: false
current position:
position:
  x: 41.820621490
  y: -212.812812113
  z: 0.11289282387
orientation:
  x: -0.999294212771589
  y: -0.000000000000000
  
```


Our Projects

■ Stereo Vision



Our Projects

■ Intelligent Gadget for Accident Prevention: Smart Helmet

<https://ieeexplore.ieee.org/abstract/document/9213742>

■ Smart Goal Keeper Prototype using Computer Vision and Raspberry Pi

<https://ieeexplore.ieee.org/abstract/document/9208910>

■ Inspecting Mega Solar Plants through Computer Vision and Drone Technologies

<https://ieeexplore.ieee.org/abstract/document/10043093>

■ Solving Combinatorial Problems through Off-Policy Reinforcement Learning Methods

<https://ieeexplore.ieee.org/abstract/document/9179423>

■ Analysis of Deep Learning Algorithms on Edge in Microscopic Fabric Dataset


<https://ieeexplore.ieee.org/abstract/document/10004659>

■ Smart Surveillance and Tracking System

<https://ieeexplore.ieee.org/abstract/document/9318134>

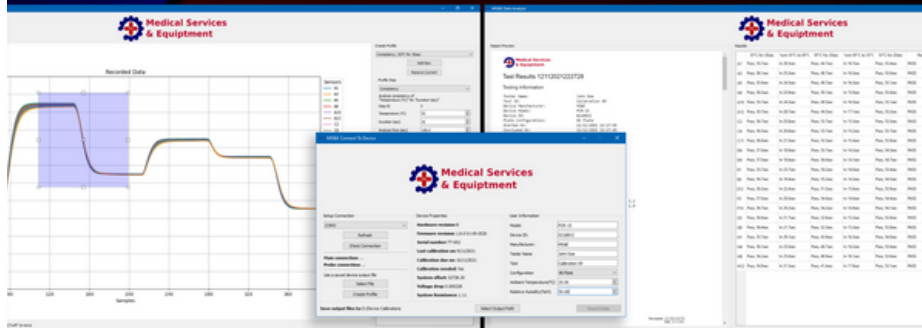
Our Projects

Desktop Application for Sensory Data Analysis

 Python
  Qt Framework
  Matplotlib

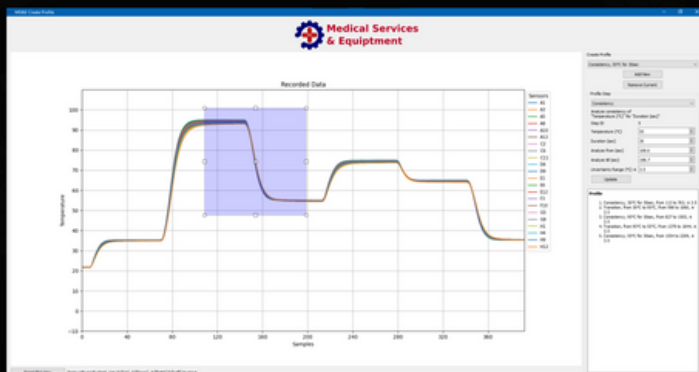
Windows Application for Data Acquisition & Analysis

Combines plotting abilities of **Matplotlib** with **Qt Framework** to allow for a seamless experience



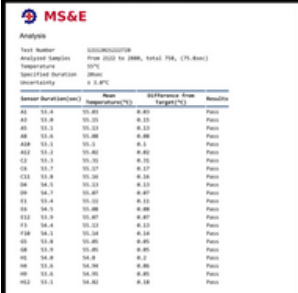
Data Graphing

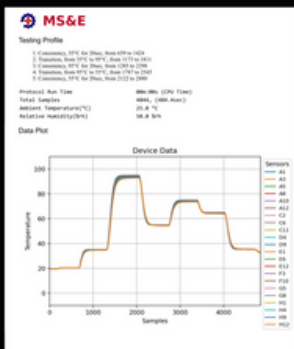
Live plot of sensory data with interactive selection for precise analysis

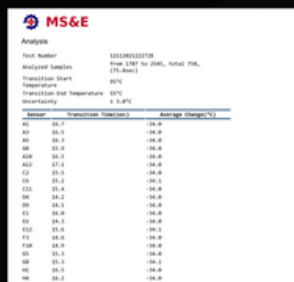


Report Generation

Automated report generation in PDF format for compatibility with wide range of applications

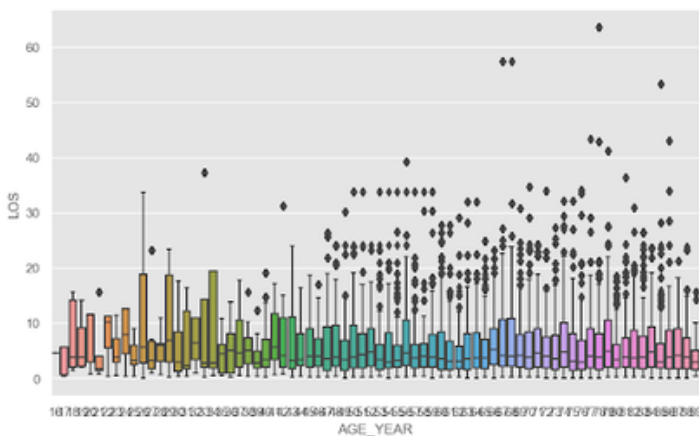
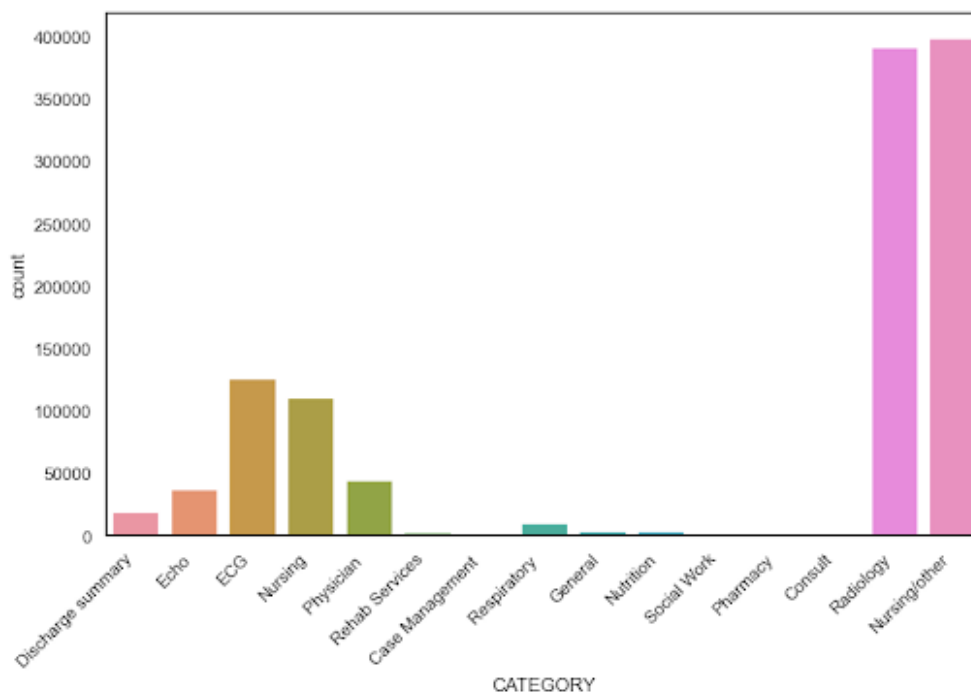






Our Projects

- **A Study of Voluminous Healthcare Dataset For Data Engineering, Response Possibilities (Predictions) and model Benchmarking**



Our Creative Team

Ammar Abbas

Founder and Board Member

*Ph.D. (AI) Marie-Curie Fellowship.
4+ Years of R&D Experience in Pakistan, Austria, and Egypt.
Skilled at Machine Learning, Python, MATLAB, Arduino, C/C++, CARLA, Simulink,
Proteus, Ansys, Mach3, SolidWorks, SolidCAM, NX, Fusion 360, and AWS.*



M. Affan

Chief Executive Officer

*M.Sc. (Robotics and AI) Erasmus Joint Masters.
4+ Years of R&D Experience in Pakistan, Saudia Arabia, France, and Spain.
Skilled at Python, MATLAB, C++, TensorFlow, Keras, PyTorch, Scikit, , NLTK, OpenAI
Gym, OpenCV, Simulink, V-REP, and Proteus.*



Jaya Rajwani

Co-Founder

*MS. (Data Science) from University of Southern California.
Experienced in Data Science, IT, Product Management, and Data Analytics.
Skilled at SQL, Python, Software Architecture, Node.js, Data Engineering, ML Tools
and AWS Pipelines.*



Saad Hasib

Technology Lead

*BEE (Computer Vision, System Design, Robotics).
4+ Years of Experience in Machine Learning, MERN Stack,
Python, Scientific Computing, and AWS.*



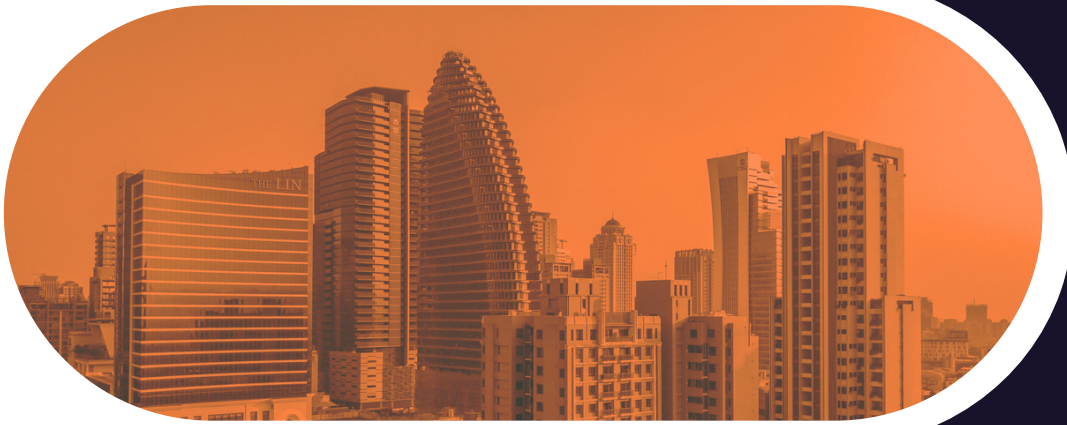
Huzaifa Habib

Chief Technology Officer

*4+ Years of Experience in MERN Stack, MEAN Stack, Git, and
Cloud Services.*



Thank You!



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Regional Plan 9, Multan, Pakistan.

*Software Technology Park, Hagenberg,
Austria.*