PERSONAL INFORMATION

Eliyas Kidanemariam Abraha

Carrer Figuerola 52,17001 ,Girona , Spain +34637845121

eliyaskidane@gmail.com

linkedin.com/in/eliyas-kidanemariam-abraha-4b9b77120

https://github.com/eliyaskidnae

portfolio

Sex Male | Date of birth 03/10/1995 | Nationality Ethiopian

WORK EXPERIENCE

July 15, 2024 -

Robotics Software Intern

farming revolution GmbH , Böhmenkirch(Germany) (farming-revolution.com)

- Worked with geographical farming field data to configure optimal paths for weeding robots, and implemented a conversion module that transforms seeding data into precise weeding field data, enabling more effective and accurate autonomous weeding.
- Camera-LiDAR fusion to improve perception and navigation capabilities , Line fitting techniques using RANSAC for robust path optimization

sector Agricultural Robotics

Feb 5, 2020- 2023

System Developer

Lion International Bank, Mekelle(Ethiopia) (anbesabank.com)

- Develop digital systems for quick and easy transactions which facilities the activities ofthe bank.
- Analyze, design, code, debug ,test , documents , implement and maintain business andclient facing applications
- Assist employee and clients with banking technical issue

sector Technology,finance

Sep 10, 2018 – Feb 5,2019

Internship

iCog Labs, AddisAbeba (Ethiopia) (www.Icog-labs.com)

- Introduce to computer vision libraries such as OpenCV

sector Information Technology

EDUCTIONAND TRAINING

Sep 10, 2023 –

Erasmus Mundus Joint Master In Intellegent Field Od Robotic System(IFRoS)

University of Girona, Girona (Spain) -Land and Marine Robots (www.ifrosmaster.org)

- Main Modules (Semester I): Autonomous Systems , Probabilistic Robotics , Multiple View Geometry , Machine Learning and Robot Manipulation
- Main Modules (Semester 2): Hands on Localization,Planning,Perception and Intervention

Eötvös Loránd University-Autonomous systems & Mobile Robotics

- Main Modules (Semester III): Deep Neural Network Development , 3D Sensing and Sensor Fusion , Intelligent Field Robots Lab , Methods and tools for AI Applications

09/2014-7/2019

B.Sc. in Computer Science and Engineering (Engineering), a Five-year Programme

Very Great Distinction Average = 3.92/4.0

Mekelle University - Mekelle Institute of technology, Mekelle (Ethiopia) (www.mu.edu.et/)

- Had Studied Artificial Intelligence, Neural Network, Computer graphics, computer architecture, algorithms design and data structures, Embedded System, Computer Networking, computer security and Cryptography,software engineering, human-computer interaction and microprocessor

PERSONAL SKILLS

Skills and Digital Competence

- Programming: Python, C++, MATLAB , Javascript(NODEJS,Vuejs Framework)
- Databases: MongoDB, MySQL
- Robotic Frameworks: ROS, Gazebo , Behavioral Trees
- Motion & Trajectory Planning: RRT, RRT*,A*, Trajectory Optimization
- Robot Localization ,Mapping and Sensors : SLAM, Sensor Integration (LiDAR,Camera IMUs, GPS)
- Robot Perception and Computer Vision : OpenCV, PCL, PyTorch, Object Detection
- Control Systems: Control loops, feedback mechanism

Communication skills

- good communication skills gained through my experience

Mother tongue(s): Tigrigna

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

ADDITIONAL INFORMATION

Projects

Motion Planning:

1. Frontier-based exploration with RRT* for path planning, incorporating Dubins path toaccommodate the dynamics of the robot in Turtlebot3 real time and simulation - Link
2. Developed pick-and-place system for predefined objects places using behavioural treesfor task planning.Link
3. Implemented A* algorithm in visibility graph and grid map for solving mazes and findingoptimal paths

Computer Vision and Machine Learning:

1. Event Based Feature Tracking Using ICP - Link
2. Monocular Visual Odometry with KITTI Dataset - Link
3. Implemented Visual Odometry with stereo camera utilizing SIFT feature matching
4. Custom Object detection using CNN and Image Captioning - Link

Probabilistic Robotics and Localization

1. Pose Graph Based SLAM using ICP for scan Matching - Link
2. Feature Based SLAM(Landmarks as Feature

Robot Manipulation and Intervention

1. Detect Object and Pick and Place Using Task Priority Algorithm Configuration , Position , Joint Limit and Inequality Task

Honour and Awards

- Award in Huawei ICT Competition 2018-2019 Global Final for Outstanding Performance
- Winning Excellent Students in Huawei ICT Competition Northern Africa 2018-2019

Seminars

- Sonar-Based Mapping and Localization by Dr. Aggelos Mallios
- Applications of Perception in Industrial Mobile Robotic Dr. EnriqueFernandez