## Giridhar Vitta Bukka

Tiergartenstrasse 22,47533 kleve, DE · +49-15759359581 · giridhar6937@gmail.com

May 27, 2022

Dear Sir/Madam,

I am writing this letter with keen interest to bring the experience I gained in the field of Robot navigation, IoT projects and computer vision to benefit your esteemed Company. The advertised position has caught my attention and I see it as a terrific opportunity for me to pursue the career path I am enthusiastic about.

In the year 2020, at HAN-AUTOMOTIVE RESEARCH, Netherlands, I was given an opportunity to pursue thesis topic in Advanced Drier Assistance System for complex maneuvering of articulated vehicles for the project VISTA (VISION SUPPORTED TRUCK DOCKING ASSISTANT) a Dutch-German INTERREG Program funded by EU. As part of the given challenge a path planning algorithm was successfully rapid-prototyped. The scenario of autonomous reverse docking and path planning using the CL-RRT algorithm for articulated vehicle configuration using tools like MATLAB/SIMULINK/STATEFLOW as my main thesis topic was implemented. After my thesis I have proactively worked with autonomous test vehicle called StreetDrone, 3D reconstruction of the environment for obstacle map creation to conduct path planning was a vital step I had to realize to implement the result obtained from the path planner through ROS framework at the HAN. Alongside software like MATLAB/SIMULINK/STATEFLOW, I gathered working experience in python and C++.

After my thesis I had an opportunity to lead a Pilot Robotics Research project at my previous employer ISIS IC GmbH, Germany. During my activities at ISIS IC GmbH industrial partner for the Project SPECTORS which is an initiative project in collaboration with other regional companies to unlock potential of drone technology, I extensively studied and worked with the opensource flight controller stacks like Ardupilot, PX4 and open-sourced libraries like Dronekit, OpenCV, OpenSFM, PCL among many. I have also diligently worked with ROS packages and ROS-Gazebo framework for algorithm simulation and testing. Implementation of RTAB-Mapping for a UAV was a key activity we achieved as the result of the project. SITL (Software in The Loop) Simulator has been extensively used to simulate the flight controller stack before implementing on the real drone.  
  
ISIS IC GmbH being a IoT based company I have collaborated closely with team of embedded systems engineers and got involved with IoT projects. There I gained initial experience with embedded C++.

Since the beginning of this year 2022 I have been taking up freelance projects in the fields of my interest like Robotics, Python and Computer Vision broadly speaking. Currently I am helping a client from fitness Industry in training a key-point detection model for their MVP creation. Involving in Freelance projects has given me great exposure and self-confidence. Meanwhile I am actively looking for a fulltime position that gives me opportunity to pursue my career path and job security.   
  
I am a doer; I do not hesitate to try out a new technology and I have proven history of responsibly completing the given tasks in time. The reference letters provided by my supervisors during my master’s thesis also support this claim.  
  
A Notice period of 15 to 30 days is preferred.  
  
I am eagerly looking to join a team with which I can pursue my passion for Research and Development. It is my pleasure if I can join your team and share its commitment.

Please feel free to email me. I hope to hear from you soon.

Sincerely,

Giridhar Vitta Bukka

## Giridhar Vitta Bukka

Tiergartenstrasse 22,47533 kleve, DE · +49-15759359581 · giridhar6937@gmail.com

May 19, 2022

Dear Sir/Madam,

I am writing this letter with keen interest to bring the experience I gained in the field of Control Theory, Robot navigation, IoT projects and computer vision to benefit your esteemed Company. The advertised position has caught my attention and I see it as a terrific opportunity for me to pursue the career path I am enthusiastic about.

In the year 2020, at HAN-AUTOMOTIVE RESEARCH, Netherlands, I was given an opportunity to pursue thesis topic in Advanced Drier Assistance System for complex maneuvering of articulated vehicles for the project VISTA (VISION SUPPORTED TRUCK DOCKING ASSISTANT) a Dutch-German INTERREG Program funded by EU. As part of the given challenge a path planning algorithm was successfully rapid-prototyped. The scenario of autonomous reverse docking and path planning using the Closed Loop - RRT algorithm for articulated vehicle configuration using tools like MATLAB/SIMULINK/STATEFLOW as my main thesis topic was implemented. A Pure pursuit steering controller was integrated into the path planning algorithm. After my thesis I have proactively worked with autonomous test vehicle called StreetDrone, 3D reconstruction of the environment for obstacle map creation to conduct path planning was a vital step I had to realize to implement the result obtained from the path planner through ROS framework at the HAN. Alongside software like MATLAB/SIMULINK/STATEFLOW, I gathered working experience in python.

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Another project where I used control theory knowledge was during an Applied Research Project. A Dynamic control strategy based on Backstepping Technique for Low-Level control is implemented considering the Dynamic model of the Skid-Steer Mobile Robot to address pose regulation and trajectory tracking problem.

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