Mini Autonomous Car

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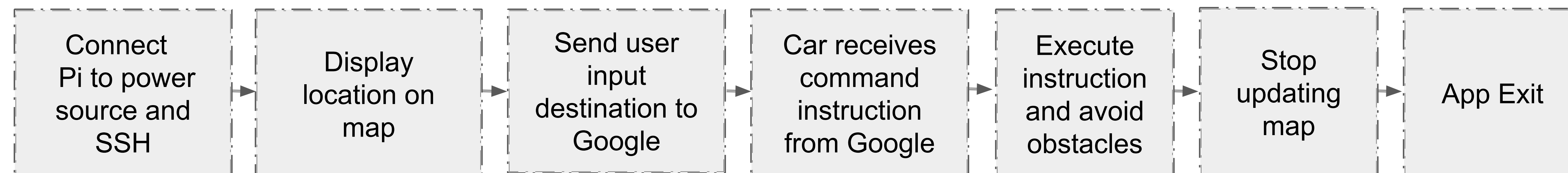Department of Electrical Engineering and Computer Science

Project Purpose

- ❏ Wireless communication system between PC and mini autonomous car
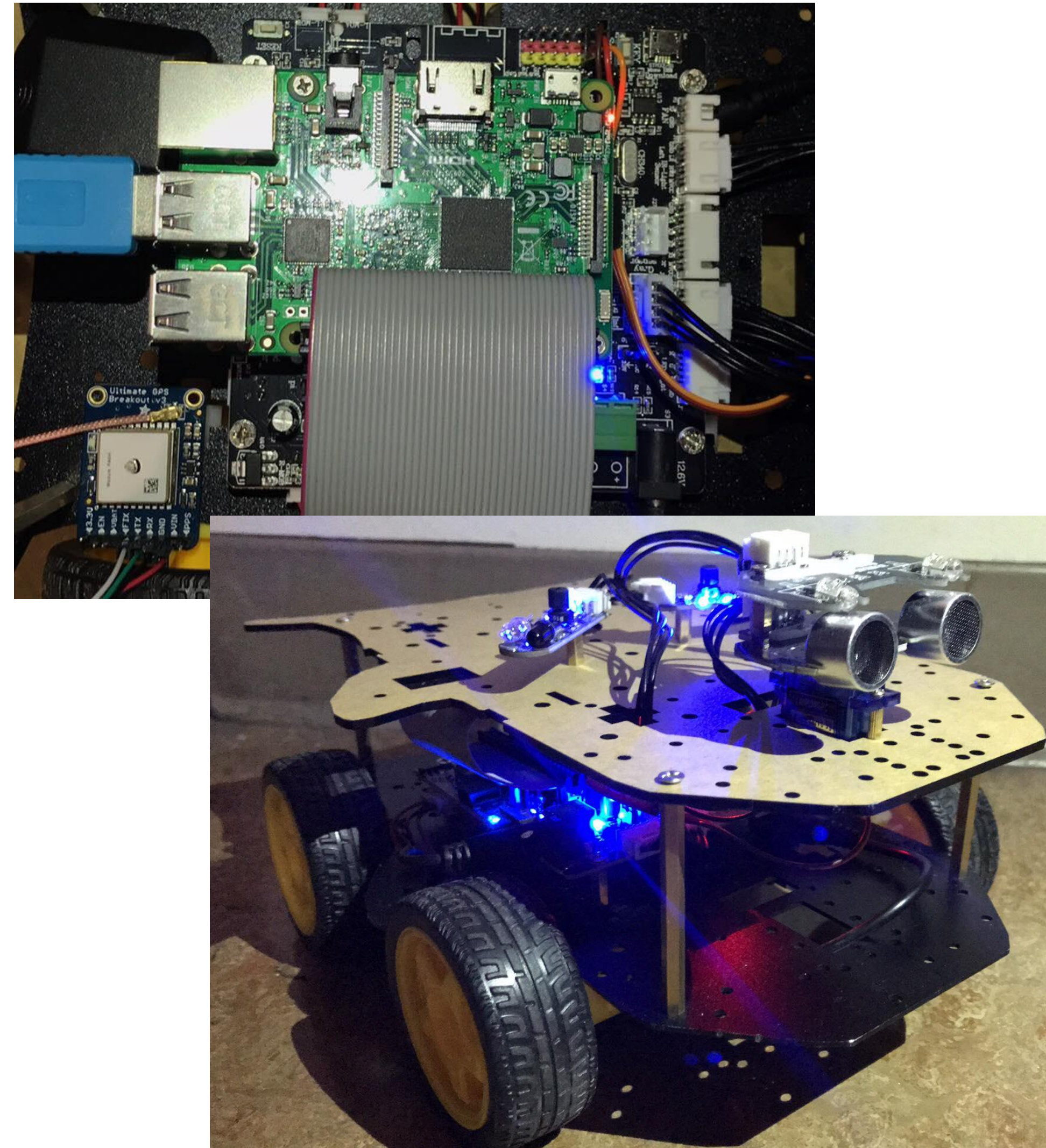- ❏ Integrated user-interface to set a final destination and track every movement

Current Status

- ❏ Able to send data from the Raspberry Pi and GPS Module to the PC.
- ❏ Integrated features inside the user interface
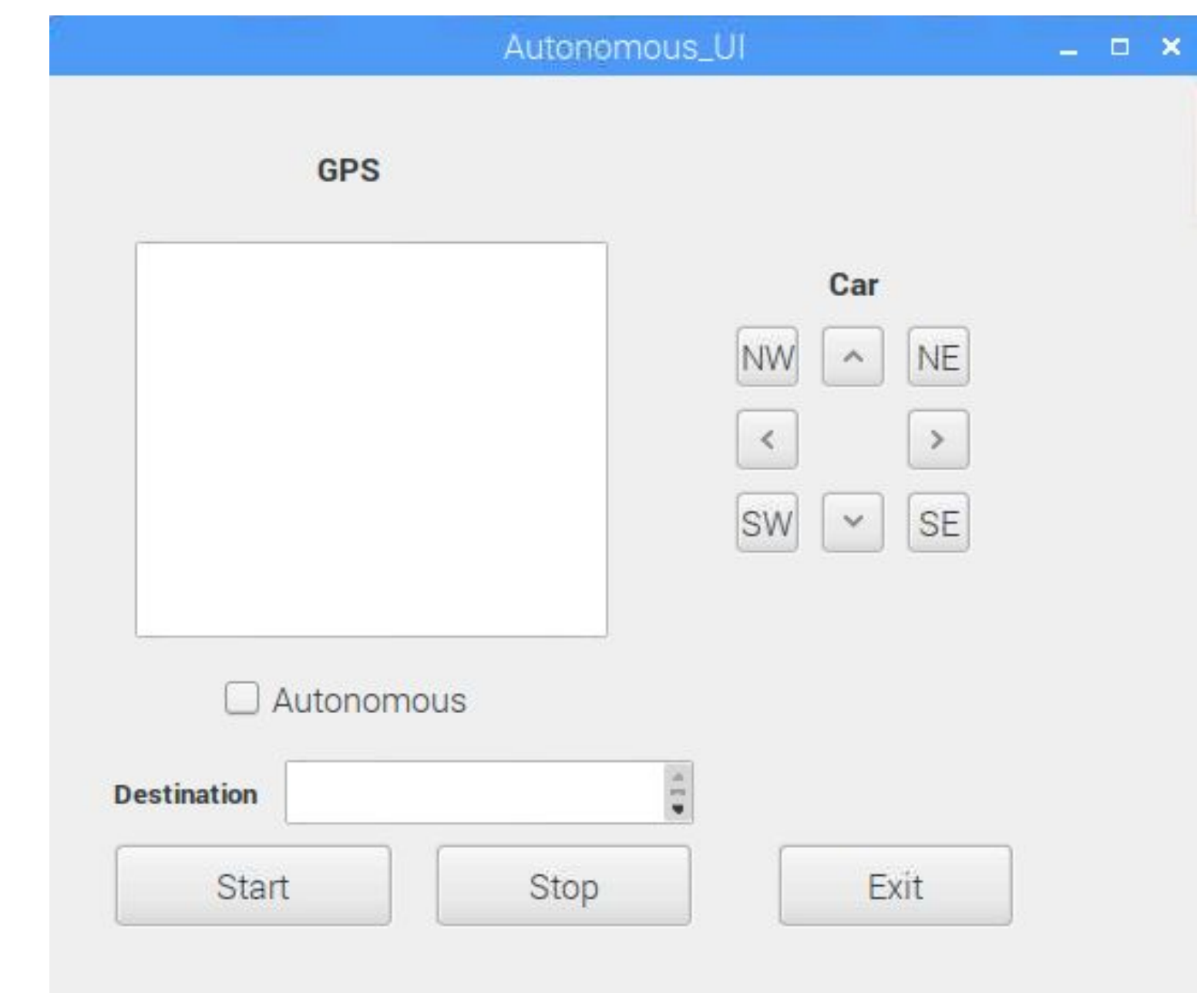- ❏ Tested the mini car and can run obstacle avoidance

Hardware

Challenges

- ❏ Getting the GPS board to send a location, and have an external antenna
- ❏ Combining user interface with GPS data to achieve end goal
- ❏ Placing infrared sensors on the top after testing to allow for better performance in obstacle avoidance

Software Approach

Connect Pi to power source and SSH → Display location on map → Send user input destination to Google → Car receives command instruction from Google → Execute instruction and avoid obstacles → Stop updating map → App Exit

Future Work

- ❏ Add 360 degree sensor
- ❏ Add camera

Sources 1) Google maps API 2) Adafruit Ultimate GPS

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