

Voice-Controlled Thumper Vehicle

Milestone II - Components & Initial Design

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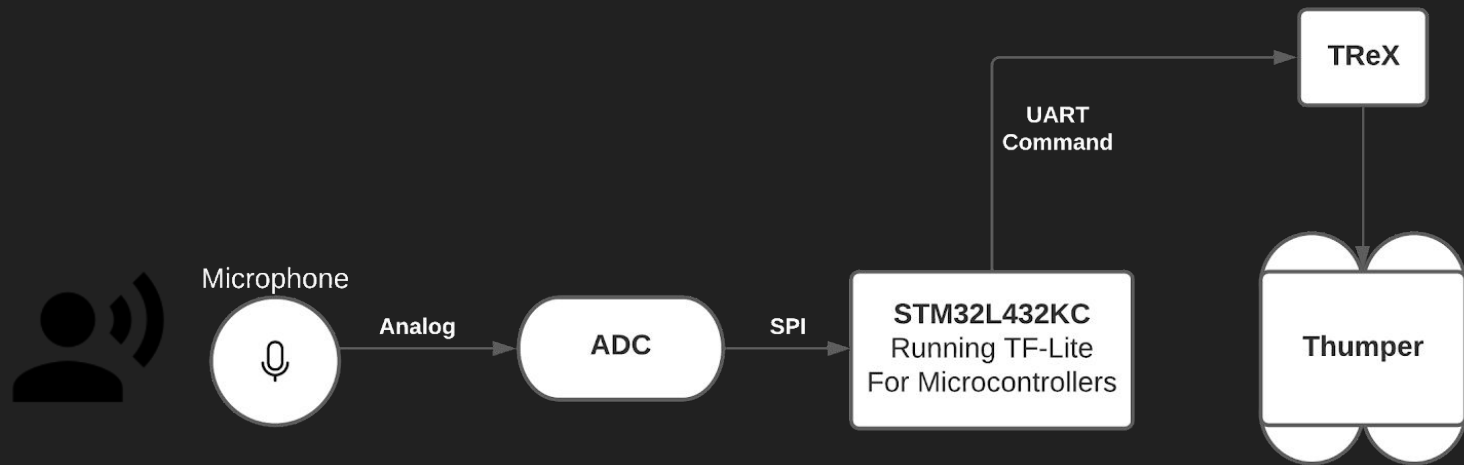
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Our Idea

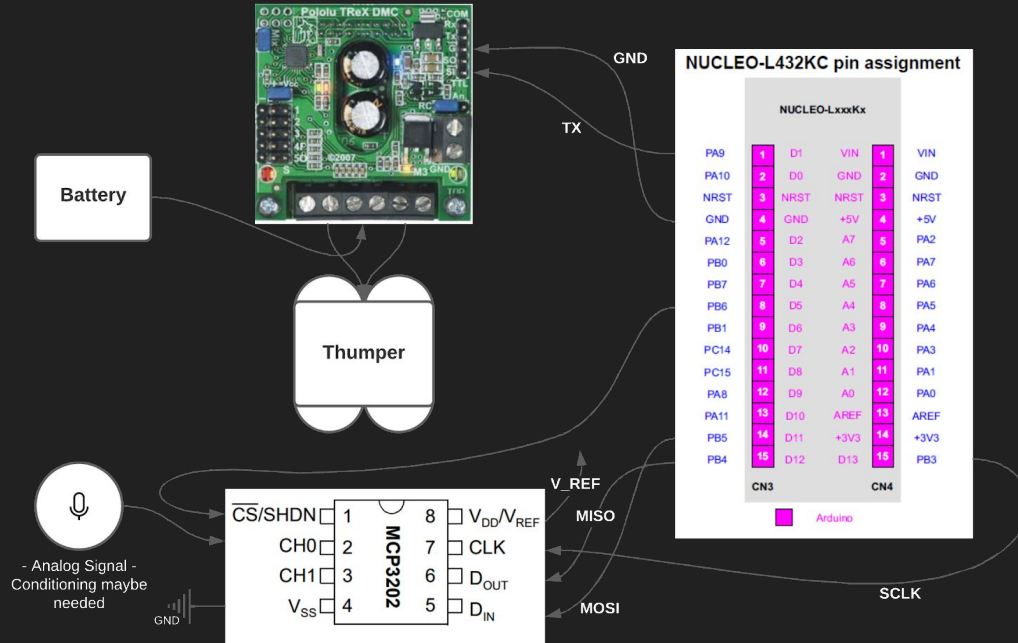
- Dagu Thumper vehicle controlled with voice commands
- Commands are processed by a machine learning model
- Model uses the Tensorflow-Lite for microcontrollers platform



Process Flow



Pins and Connections



Components Required (HW)

Components Required	Acquisition Means
POLULU Dagu Wild Thumper with Battery	AUC
POLULU TReX	AUC
Microphone	AUC / UGE-ONE
STM32L432KC	AUC
ADC - MCP3202	AUC

Tools (SW)

- TensorFlow-Lite for microcontrollers
 - Using a pretrained model!
- Keil μ vision IDE
- STM32CubeMX

Thank You!