Morphological Chart of the electronic components of Autonomous parking system										
sub functions	Solutions									
processing signals from sensors	Arduino uno [2x]		Arduino Mega [2560 Rev3 -		Raspberry pi		Banana Pi			
Criterium	2	3	2	3	2	1	2	1		
	0	3	0	3	0	2	0	1		
detection of the obstalces	Magnetic proximity sensor		Capacitive proximity sensor		Ultrasonic proximity sensor [HC-SR04 6x]		Inductive proximity sensor		Optical ultrasonic sensor	
Criterium	3	2	2	1	3	3	1	1	1	1
	0	1	0	1	0	3	0	2	0	2
supplying energy to the	shared supply for shield & controler		5V battery		usb conection		5V adapter			
Criterium	3	2	3	3	2	2	2	3		
	0	3	0	3	0	1	0	2		
measuring the speed of the car	Infrared sensor module [Arduino 51 AVR pic]		Arduino Speed sensor module		Magnetic speed sensor		Gears detecting speed sensor			
Criterium	3	3	2	2	2	2	2	2		
	0	3	0	3	0	2	0	1		
piloting of the steering axle	Servo		Stepper motor [23byj-48]							
Criterium	3	3	3	3						
	2	2	3	3						
wireless communication	Radio Frequency module		Wi-Fi		Cellular		Bluetooth [SPP2.0]			
Criterium	2	2	2	2	1	1	3	3		
	3	2	3	2	3	1	3	3		
piloting of the motors and engine	Servo		Arduino Motor Shield [L293D]							
Criterium	3	3	3	3						
	2	2	3	3						
supplying energy to the stepper	Lipo battery [12V]		12V adapter		Battery basket [3x 18650 (12V)]					
Criterium	3	2	3	2	3	3				
	0	3	0	2	0	3				
propelling the car	Integrated system of Wheel+engine [65x26mm, 5V, 48:1 gear x2]									
Criterium	3	3								
	3	3								

Criterium	
Price	Availabilyty
durability	Ease of use

Final Choice

Criterium Scale			
0- unable to judge	1- nonsatisfaction	2- partial satisfaction	3- full satisfaction