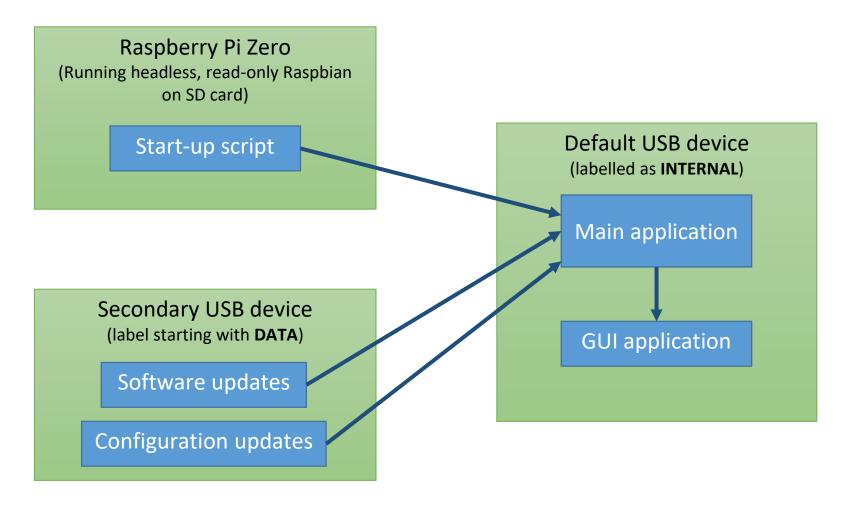
## Software high-level architecture



## UML diagram of GUI application Spectrometer DataStorage Main +integration time: integer +default storage dir: String +detected spectrometer: string tuple +main(): integer -detect\_USB\_drive(): integer +save\_on\_internal(): integer +set integration time(): integer -update software(): integer +copy to external(): integer +get spectrum(): array -start GUI(): integer +save config to file(): integer -detect spectrometer(): integer -update configs(): integer HardwareInterface -batt status LED: integer -activity status LED: integer Logger -shutdown button: integer GUI +trigger pressed: boolean +default log dir: String +default log file: String +screen size: integer tuple +detect button trigger(): boolean +show batt status(): integer +save\_log\_to\_file(): integer +initialize(): *integer* +show activity status(): integer +render GUI layout(): integer +touch event listener(): integer +hardware\_trigger\_listener(): integer +display frame with FoV(): integer RTC Configurations(YAML) +show location(): integer +default I2C addr: integer +default yaml file: String +show datetime(): integer -real time: datetime -all configs: String tuple +update batt status(): integer +save\_data(): integer -parse RTC(): integer -parse yaml file(): integer +export config(): integer +get\_time\_update(): datetime +get config(): String tuple **GPS** Camera +default input port: String +default input port: String Power -gps value: float tuple -battery status: *float* -initialize camera(): integer -parse GPS(): integer -read camera frame(): integer +get battery status(): float +get gps value(): float tuple +get camera frame(): numpy array