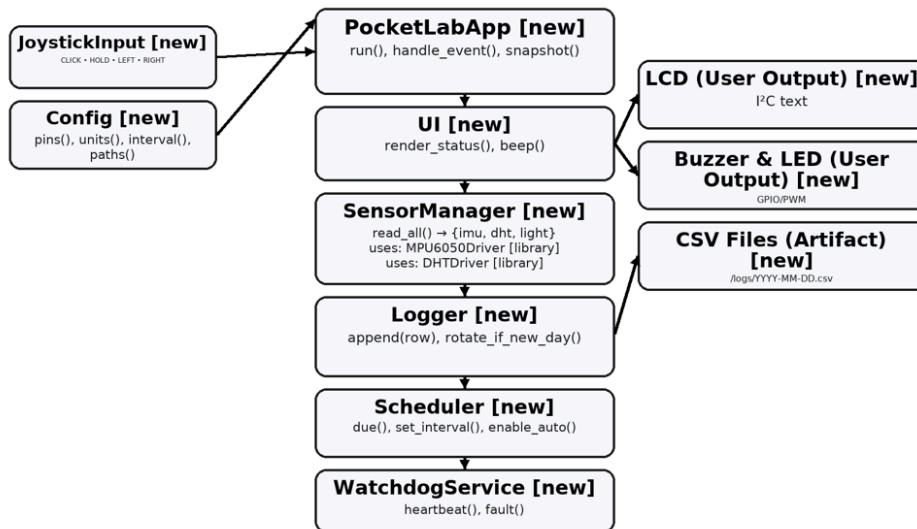


## Software

- OS: Debian-based Linux image for PocketBeagle
- Runtime: Python 3 application
- Services & boot: systemd service to auto-start the logger on power-up
- Sensor libraries/drivers:
  - I<sup>2</sup>C via smbus2/Adafruit MPU6050 (or minimal MPU6050 driver)
  - DHT via a reliable GPIO-timing library
  - ADC via PB's analog or a Python wrapper
  - LCD via Adafruit CharLCD or equivalent



Flow: JoystickInput → PocketLabApp → SensorManager → Logger → CSV

User outputs: PocketLabApp → UI → LCD / Buzzer & LED

Status tags: [new] = you'll write it, [library] = reuse an existing driver