Sapien-Tech

INTERNSHIP • 4 MONTHS

Electronics Engineer

Device Assembly, Bring-Up & Data Testing

Location	Remote-first (occasional on-site / lab days may be arranged)
Type	Internship — full-time hours
Duration	4 months
Compensation	Unpaid internship
Reports to	Ali Alhubaishi, CEO & Founder

About the Role

Join Sapien-Tech as an Electronics Engineering intern and help us build and test our condition-monitoring devices for industrial machines. You will assemble units, program the microcontroller using the Arduino framework, and run the tests that prove each unit works before it ships. This is a hands-on, test-focused role: you will be mentored, given real tasks, and your work will feed directly into live customer hardware.

The internship is remote-first — we ship you the development kits and boards you need. For some hardware bring-up and bench testing, occasional on-site or lab days may be arranged.

What You'll Do

BUILD & PROGRAM

- Assemble sensor units — soldering, rework, and mechanical assembly.
- Flash and configure firmware on the microcontroller using the Arduino framework.
- Bring up new boards: power them safely, check rails, and confirm they start and read the sensor.

SENSOR & DEVICE TESTING

- Test the sensors and confirm the readings are correct.
- Run bench tests with lab equipment (multimeter, oscilloscope, bench power supply).
- Build simple, repeatable test setups and pass / fail checklists so anyone can re-run them.

DATA & QUALITY

- Capture data from the device and check it for accuracy and consistency.
- Document test results clearly and report findings the team can act on.
- Support quality checks as devices move toward small production batches.

What We're Looking For

- Studying towards (or recently finished) a degree in Electronic / Electrical Engineering or similar.
- Some hands-on programming with Arduino / microcontrollers (or real eagerness to learn).

- Comfortable soldering and using basic lab tools.
- Solid grasp of analog and digital circuit basics.
- Careful, organised, and good at writing things down.

Nice to Have

- Projects with Arduino, microcontrollers, or single-board computers (e.g. Raspberry Pi).
- Experience with sensors of any kind.
- Familiarity with a PCB tool (KiCad, Altium, or Eagle).
- Experience with version control (Git).

What You'll Gain

- Real project experience on hardware, firmware, and data that ships in live products.
- One-on-one mentorship from senior engineers.
- A finished project you can show in your portfolio.
- A reference letter on completion, and a possible path to a full-time role.

How to Apply

Send your CV and a short note about a project you've worked on to info@sapien-tech.io. If you have a portfolio, GitHub, or project photos, include them — we care more about what you've built than perfect grades.

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INTERNSHIP • 4 MONTHS

Firmware Engineer

Embedded Systems & Firmware Development

Location	Remote-first (occasional on-site / lab days may be arranged)
Type	Internship — full-time hours
Duration	4 months
Compensation	Unpaid internship
Reports to	Ali Alhubaishi, CEO & Founder

About the Role

Join our firmware team building the embedded code that runs on our condition-monitoring devices. You will write and test firmware (Arduino framework, C / C++) that reads sensors, processes the data, and sends it securely to the cloud. You will be mentored by senior engineers and own meaningful pieces of the firmware — with a strong focus on testing what you build.

The internship is remote-first — we ship you the development kits and boards you need. For some hardware bring-up and bench testing, occasional on-site or lab days may be arranged.

What You'll Do

FIRMWARE DEVELOPMENT

- Write and test firmware for the microcontroller using the Arduino framework (C / C++).
- Build and improve drivers for sensors and peripherals (I2C, SPI, UART, ADC).
- Help manage power, sleep modes, and reliability for field devices.

CONNECTIVITY & DATA

- Send device data securely to the cloud over a wireless connection.
- Help define and maintain the on-device data format and sampling.
- Support remote update and configuration.

TEST & DEBUG

- Write small tests and bench-check firmware against real hardware.
- Use serial logs, debuggers, and logic analysers to find and fix issues.
- Confirm the readings are accurate and repeatable before release.

What We're Looking For

- Studying towards (or recently finished) a degree in Computer / Electronic Engineering, Computer Science, or similar.

- Hands-on coding in C / C++, ideally with Arduino / microcontrollers.
- Basic understanding of how microcontrollers and sensors work.
- Methodical at debugging and comfortable reading a datasheet.
- Careful, organised, and good at writing things down.

Nice to Have

- Experience with Arduino or other microcontroller platforms.
- Exposure to sensors, wireless connectivity, or real-time programming.
- Personal or course embedded projects.
- Experience with version control (Git).

What You'll Gain

- Real project experience on hardware, firmware, and data that ships in live products.
- One-on-one mentorship from senior engineers.
- A finished project you can show in your portfolio.
- A reference letter on completion, and a possible path to a full-time role.

How to Apply

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INTERNSHIP • 4 MONTHS

Full-Stack Engineer

Backend, API & Dashboard Development

Location	Remote-first (occasional on-site / lab days may be arranged)
Type	Internship — full-time hours
Duration	4 months
Compensation	Unpaid internship
Reports to	Ali Alhubaishi, CEO & Founder

About the Role

Help build the cloud platform and dashboards that turn raw device data into clear insight for customers. You will work across the stack — ingesting data from the devices, storing time-series data, building APIs, and creating the web dashboards engineers and plant managers actually use. You will be mentored, given real tasks, and your work will ship in live products.

The internship is remote-first — we ship you the development kits and boards you need. For some hardware bring-up and bench testing, occasional on-site or lab days may be arranged.

What You'll Do

BACKEND & APIS

- Build and maintain backend services and REST / web APIs.
- Ingest data from the devices into the platform.
- Work with databases (including time-series data) for reliable storage and queries.

DASHBOARDS & FRONTEND

- Build clean, responsive dashboards that visualise live device data and trends.
- Turn customer and engineering needs into simple, usable screens and charts.
- Improve performance, layout, and the overall feel of the product UI.

TEST & DELIVERY

- Write clear, tested code and help with code review.
- Help with deployment, logging, and basic monitoring.
- Document how things work so the team can build on it.

What We're Looking For

- Studying towards (or recently finished) a degree in Computer Science, Software Engineering, or similar.
- Coding experience in JavaScript / TypeScript or Python.

- Basic understanding of web APIs, HTML / CSS, and databases.
- Curious about how data flows from a device to a screen.
- Careful, organised, and good at writing things down.

Nice to Have

- Experience with Node.js, React, or a modern frontend framework.
- Exposure to time-series databases, cloud platforms, or Docker.
- Personal or course web / data projects.
- Experience with version control (Git).

What You'll Gain

- Real project experience on hardware, firmware, and data that ships in live products.
- One-on-one mentorship from senior engineers.
- A finished project you can show in your portfolio.
- A reference letter on completion, and a possible path to a full-time role.

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INTERNSHIP • 4 MONTHS

Hardware Test Engineer

PCB Bring-Up, Validation & Reliability

Location	Remote-first (occasional on-site / lab days may be arranged)
Type	Internship — full-time hours
Duration	4 months
Compensation	Unpaid internship
Reports to	Ali Alhubaishi, CEO & Founder

About the Role

Help make sure our condition-monitoring devices are reliable before they reach customers. You will build test rigs, run validation and reliability testing, take careful measurements, and document results so the team can trust every unit that ships. This is a hands-on, test-focused role across the bench, working closely with the hardware and firmware engineers.

The internship is remote-first — we ship you the development kits and boards you need. For some hardware bring-up and bench testing, occasional on-site or lab days may be arranged.

What You'll Do

TEST SETUPS & FIXTURES

- Build simple test rigs and fixtures for repeatable, hands-off testing.
- Help bring up devices and confirm they meet the basic spec.
- Create clear test procedures and pass / fail checklists.

VALIDATION & MEASUREMENT

- Run validation and bench tests with lab equipment (multimeter, oscilloscope, power supply).
- Take accurate measurements and compare results against requirements.
- Find, reproduce, and log faults clearly for the engineering team.

RELIABILITY & REPORTING

- Support reliability and environmental checks (temperature, power, long-run tests).
- Capture and tidy test data, then report findings the team can act on.
- Help track issues through to a confirmed fix.

What We're Looking For

- Studying towards (or recently finished) a degree in Electronic / Electrical Engineering or similar.
- Comfortable using basic lab instruments.

- Some familiarity with Arduino / microcontrollers is helpful.
- Methodical, patient, and precise with measurements.
- Careful, organised, and good at writing things down.

Nice to Have

- Some scripting for test automation (Python is a plus).
- Awareness of design-for-test or design-for-manufacture ideas.
- Personal or course hardware projects with Arduino / microcontrollers.
- Experience with version control (Git).

What You'll Gain

- Real project experience on hardware, firmware, and data that ships in live products.
- One-on-one mentorship from senior engineers.
- A finished project you can show in your portfolio.
- A reference letter on completion, and a possible path to a full-time role.

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