

Laurynas Misiūnas

Automation • Electronics • Programming

I want to build new technology, myself or leading a team. I like building systems from start to finish: from the board and the code to running in production.

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ABOUT ME

I have a degree in programming, but I see myself more as an engineer: I like building systems where **code meets the physical world.**

I have worked with smart home technology for more than 10 years, spent nearly 8 years as an electronics technician at the **Philip Morris Lietuva** factory, and before that ran a branch and worked in logistics. I design boards and enclosures, often use a 3D printer, write firmware, train recognition models and run servers.

I work with **AI agents**: I use Antigravity, Codex and Claude Code. The agents run on a separate server of my own, and I have automated my processes: each project has its own agent, a coordinator passes information between them and an assistant keeps the task queue. We write the code together, while the decisions, the checking and the responsibility stay with me. That is how I run several projects at once on my own. Now I am looking for a role where I can build new technology as an engineer or a team lead.

14+
Years of work experience

100s
Of my LED controllers sold

40%
Growth in work volume I achieved in logistics

#1
My branch by turnover

EXPERIENCE

06/2026 — NOW · GARGŽDAI

My own project

manoLT

I work full time on manoLT, a smart city system for municipalities. I built the LoRaWAN sensor network, server, dispatcher dashboard, tablet and resident app myself. I am currently working with Klaipėda Science and Technology Park, which awarded innovation support for the technology, and I present the system to municipalities in person.

10/2018 — 06/2026 · KLAIPĖDA

Electronics technician

Philip Morris Lietuva, UAB

I introduced many improvements to production machines, and my automation solutions saved time, resources and money. I helped roll out new-generation factory equipment. I built and deployed the AI cigarette detection, compressed air control and vibration monitoring systems myself, plus a program to save and restore machine settings.

05/2014 — 05/2018 · KLAIPĖDA

Branch manager

Akmas, UAB

I built the branch from zero. I created a steadily growing client base and greatly increased awareness of and trust in the company. My branch's turnover overtook all the other branches.

09/2012 — 04/2014 · KAUNAS

Logistics manager

Projektana, UAB

I grew work volume by 40% and cut errors and defects by more than half. I raised staff qualifications and introduced technologies that lowered costs and sped up the work. Staff became happier at work and got along better.

SKILLS

Industrial automation
Maintenance of PLC-controlled production machines, fault finding, machine settings backup, RFID control

Embedded
ESP32, ESP32-S3, Raspberry Pi, C++ / Arduino, I2S, SPI, I2C, UART

Wireless
LoRa, LoRaWAN, ESP-NOW, MQTT, Zigbee, Z-Wave

Electronics & mechanical
KiCad, PCB design, battery power, soldering, Fusion 360, OpenSCAD, 3D printing

Artificial intelligence
YOLO, Hailo, ONNX, Edge Impulse, OpenCV, Claude Code, Codex, Antigravity

Software
Python, JavaScript, VBScript, SQLite, Grafana, Docker, Linux, systemd, Git

EDUCATION & LANGUAGES

Programming Higher education

Languages Lithuanian **Native** English **Working proficiency**

PROJECTS

My principle when building systems: **First do it, then do it right, then do it better.**

AI monitoring of twisted cigarettes



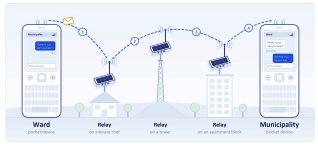
I built a computer vision system that detects twisted cigarettes on a production line and alerts the operator in real time. I put it together from a Raspberry Pi 5, a Hailo AI HAT accelerator and a Global Shutter camera. I selected more than 1000 images and trained a YOLO model in Google Colab. I deployed the system at the Philip Morris Lietuva factory.

manoLT: smart city system



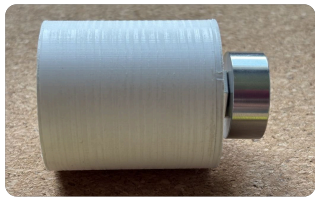
This is my largest project: one platform for municipalities and residents, which I build on my own, from electronics to server and screens. I made a dispatcher dashboard with a city map, resident alerts with a danger zone, an app with all 6,583 Lithuanian shelters and a tablet for shelter keyholders. Sensors on LoRaWAN, Zigbee and Z-Wave measure air, water level, noise and shelter status. I also built an acoustic drone detection station with an ESP32-S3 and 4 microphones and tested it outdoors with real drones. I am currently working with Klaipėda Science and Technology Park, which awarded innovation support for the technology, and I present the system to municipalities.

Day X communications: emergency radio network



I am building a separate communications layer for a crisis: when the internet or mobile network goes down, a municipality and its wards will still be able to exchange short messages. Messages will hop from device to device through radio nodes running on batteries and solar panels, with no operators and even if the server stops. I compared LoRa (Meshtastic, MeshCore), PMR446 and Wi-Fi options and used AI to calculate link distances and energy needs. I am currently designing the network as part of manoLT.

Wireless vibration sensor



I built a wireless sensor for monitoring bearings and motors. It measures vibration up to 6.3 kHz, runs the FFT itself and sends only a spectrum summary over LoRa, so it can run on a battery. I designed the boards, the 3D-printed housing and the aluminium pad that mounts it on the machine. The second generation works, and I designed the third, a single-board version, with AI assistance and am preparing it for production.

Mobile vibration monitoring system



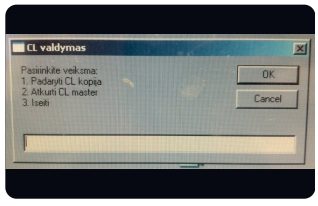
I built a wireless system for the factory that helps spot faults in motors, gearboxes and fans early. ESP32 sensors read vibration up to 6 kHz and send data over ESP-NOW to a Raspberry Pi 4, and I show the results on Grafana dashboards. The sensors run for up to 2 days on battery, so machines can be compared right on the production floor.

Compressed air control system



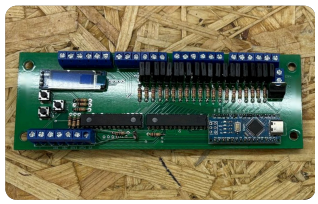
I built a system that saves compressed air while machines are idle. I mounted control units with an LCD screen and RFID reader on the machines: service staff switch the air on with a card for a limited time, such as 30 minutes, and then the valves close on their own. For managers I made real-time remote monitoring and a status board for LUF16, 17 and 18, and I kept the whole plant connected with my own network repeaters.

CL manager: machine settings program



I wrote a program for Philip Morris industrial machines that saves and restores machine settings. Its menu makes a dated CL backup, restores a chosen backup and checks for differences. I adapted it for Protos and Magomat machines, and after a restore the program shows how to send the parameters to the PLC.

Staircase LED lighting controller



I built my own product: an automatic staircase lighting controller. I did everything myself from firmware to PCB and sold several hundred units. Sensors at the bottom and top of the stairs light the steps one after another in the walking direction, and a fade effect turns the light on and off smoothly. Functions are chosen in the controller's menu, and switches, a light sensor and 12 V LED strips connect to it.

I built all of this myself. Imagine what I could do working full time on your team.