



Andrejs Bondarevs, Embedded Systems Consultant

Dedicated and passionate, software and hardware engineer with 6 years of a professional experience, and 4 years background in consulting. Has experience in system development and integration, embedded systems, software development, automotive, circuit and PCB design. Has worked with development of LLVM Toolchain, Automotive Telematics Control Unit, Selective Laser Sintering 3D Printer and Wireless Sensor Networks.



+46 (0) 707 20 14 52



andrejs@beastdevices.com



Beast Devices Sole Proprietorship
Approved for F-tax
VAT SE900529795801



Category B driving license

Experience

2020

Imsys

LLVM Toolchain Software Developer

Toolchain software development for the IM4000 processor architecture.

- LLVM compiler backend C++ software development.
- Newlib C standard library and FreeRTOS porting.
- Software verification automation using Python.

Actia Nordic

Automotive Hardware Engineer

Automotive hardware design of the ACU6 Telematics Control Unit.

- High-speed circuit and PCB design in Altium, Orcad and PSpice.
- Hardware verification automation using Python.
- Pre-compliance testing at EMC lab.
- DFMEA and test coverage analysis.
- Graduate thesis work supervision.

2019

Wiotech

Software and Hardware Engineer

Software, hardware, system and product development of the ZigBee based climate control service.

- C embedded software development for ZigBee stack.
- Java software development of ZigBee AMQP gateway.
- Cloud service infrastructure development and maintenance.
- Circuit and PCB design for the wood moisture content sensor using in Altium.

Wematter

Embedded Engineer

Software, hardware, system and product development of the industrial Selective Laser Sintering 3D Printer in a startup environment.

- C embedded software development for ARM Cortex M7, FreeRTOS.
- Linux based C++ embedded software development for x86.
- Image acquisition using Gstreamer library.
- Linux system administration.
- Circuit and PCB design in Altium.
- Test fixture development and test automation using Python.
- Laser scanning.
- Research, tests and measurements of the DC and RF CO2 Class 4 lasers.

2018

AVAC Vakuumenteknik

Hardware Engineer

Controller hardware development for the industrial Venturi vacuum generator.

- Circuit design (MCU, solenoid driver, ESD protection, analog signal sensing).
- Compact PCB design, prototype manual SMD assembly and verification.

2017

Ericsson

Electronics Hardware Responsible

Responsible for the electronics hardware development of seven complex test fixtures for enterprise rack NAS server motherboard and other PBAs, in a team of 10+ people.

- Circuit and PCB design in Altium.
- Cable harness design.
- Troubleshooting, fixture and PBA assembly.

2016

Linköping University

Research Engineer in Communication Electronics

Research and development of the Wireless Sensor Network and Cloud Services for the SmartCity project in Norrköping, Sweden.

- C embedded software development using ZigBee stack for battery- and mains-powered sensors.
- C++ MFC and C#.NET software development.
- Electronics prototyping, tests and measurements.
- Leading the research of the IoT air quality monitoring for green walls.
- Collaboration on research of the ZnO nanostructures based piezoelectric energy harvesting.

2015

2014

2013

2012

SAF Tehnika

Engineering Technician

Production, testing and troubleshooting of microwave (5 to 38 GHz) point-to-point link radios.

- Reliability validation using temperature cycling and Bit Error Rate measurements.
- Troubleshooting of the hardware design errors on a component level.
- C#.NET software development for production automation.
- Linux based C embedded software development.

Education

Master's degree in Electrical Engineering

Defended Master Thesis "Low-Power Direct Current Uninterruptible Power Supply Using Supercapacitors" at Riga Technical University. Main courses included Digital Communication Electronics, Digital and Analog Electronics, Semiconductor Technology and Digital Signal Processing.

Exchange studies

Exchange studies for one year during studies for the Master's degree. Involved taking courses in Semiconductor Technology and Digital Communication Electronics, as well as development of the Master Thesis "Low-Power Direct Current Uninterruptible Power Supply Using Supercapacitors".

Bachelor's degree in Electrical Engineering

Defended Bachelor Thesis "Automatic Gain Control in Microwave Radio Frequency Range" at Riga Technical University. Main courses included Circuit Analysis, Electrodynamics, PCB Design, Computer Science and Algorithms.

Certifications

CE-marking with the focus on electrical products
Intertek, Stockholm, 2018

Skills

Programming Languages

C	C#	Java	Bash	SQL
C++	Python	JavaScript	PHP	MATLAB

Software

Git	AMQP	IEEE 802.15.4	CSS	AVR
SVN	LLVM	TCP	HTML5	8051
MQTT	ZigBee	UDP	ARM	

Hardware

Automotive	High-speed	Circuit Studio	PSpice	Fusion 360	Laser Class 4
Circuit Design	Altium Designer	KiCAD	DFMEA	3D Printing	Batteries
PCB Design	Orcad	Eagle	VHDL	Laser scanning	Supercapacitors

System

Linux admin	GitLab	Grafana	KVM	OpenVPN	OpenPGP
IoT	Phabricator	InfluxDB	RabbitMQ	pfSense	
Zabbix	JIRA	Docker	Apache	iptables	

Publications

Universal Internet of Things solution: Protocol independent

Bondarevs A, Huss P., Ye Q. & Gong S.
2017, IEEE International Conference on Industrial Technology (ICIT)

Green walls utilizing Internet of Things

Bondarevs A., Huss P., Gong S., Weister O. & Liljedahl R.
2016, Sensors & Transducers Journal, 192(9), 16-21

Low-Frequency Self-Powered Footstep Sensor Based on ZnO Nanowires on Paper Substrate

Nour E., Bondarevs A., Huss P., Sandberg M., Gong S., Willander M. & Nour O.
2016, Nanoscale Research Letters, 11(156)

Activities

Cycling, swimming, camping, hiking, urban exploration.

Languages

English

Full professional proficiency

Swedish

Limited professional proficiency

Russian

Native or bilingual proficiency

Latvian

Full professional proficiency