Martin Vincent BLOEDORN

Control and Automation Engineer.
Robotics, 3D-Printing and Embedded Programming aficionado.

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EXPERIENCE

FEB 2019 - ONGOING

SOFTWARE ENGINEER, HEIDENHAIN Numeric Eindhoven B.V.
Embedded development of modern GUI for high-end CNC controllers.

Architectural work on the new generation of CNC controller interfaces at HEIDENHAIN, a market-leader OEM for CNC actuators, sensors and controllers. Use of C++17/Qt/QML on an Agile, multilingual development team coordinated across Germany, the Netherlands and Switzerland.

FEB 2017 - 2019

EMBEDDED SOFTWARE ENGINEER, Cold Chain Vision
Development and mass production of a temperature data logger for logistic chains.

Developed hardware/firmware and PC/Mac software for TEMPINSPECT, a temperature data logger. Managed logistics, PCB and case manufacturing. Implemented custom testing equipment and worked on-site at the assembly line in Shenzhen, China.

MAR 2016 - 2019

FREELANCE ENGINEER
Work and management on hardware and software projects.

IRRIGASOL: firmware for a solar-powered three-phase frequency inverter with MPPT.
CN QUOTE GENERATOR: QT-based desktop application for *Concepts NREC*, automating the generation of product quotations across a large portfolio. Implemented *ActiveX* bindings to retrieve data from customer's databases, a dynamic UI to reflect its changes and direct export to XLSX files.
CURVATIO: hardware/software for non-invasive spinal curvature measurement device

JUN 2016 - JAN 2017

CAM ENGINEER, Fluxus Engenharia
User support and training for MAX-PAC 5-axis CAM software.

MAR 2009 - DEC 2014

MOBILE ROBOTICS TEAM LEADER, Robota
Mobile Robotics R&D students team at Universidade Federal de Santa Catarina (UFSC).

AUG 2013 - JUL 2014

HARDWARE & SOFTWARE DEVELOPER, Control and Automation Laboratory
Hardware and software development for an Unmanned Aerial Vehicle (UAV).

OCT 2012 - JUL 2013

INTERN, Fakultät Automatisierungstechnik
Modelling and calibration of fish-eye cameras at Technische Universität Dresden *(TUD).*

MAIN PROJECTS

2017 - 2018

TEMPINSPECT: Temperature data logger for logistic cold-chains
Implemented on-device (ARM Cortex-M0+) PDF and CSV report generation, USB communication and ultra low-power modes.
coldchainvision.com, coldchainvision.com/software

2016

CURVATIO: Non-invasive measurement device for spinal curvature
Developed hardware and firmware, including on-board IMU data fusion algorithms.
biorob.com.br, martinvb.com/curvatio-video, martinvb.com/curvatio-paper

2015

BIOHAND: Prototype of a low-cost 3D-printed open source prosthetic hand
martinvb.com/biohand

2014

3DCNC: 3D printer and CNC multi-purpose machine
martinvb.com/3dcnc

Education

2016 - 2017	CONTROL AND AUTOMATION ENGINEERING, Postgraduation **Universidade Federal de Santa Catarina** (UFSC), *Brazil* Interrupted
2009 - 2015	CONTROL AND AUTOMATION ENGINEERING, Diploma **Universidade Federal de Santa Catarina** (UFSC), *Brazil* Thesis: "Prototype of a low-cost cost open source prosthetic hand" Supervisor: Prof. Hector BESSA SILVEIRA GPA: 8.1/10
2012 - 2013	AUTOMATISIERUNGSTECHIK, Exchange Student **Technische Universität Dresden**, *Germany*
2008	BASIC ELECTRONICS, Technical Course **Serviço Nacional de Aprendizagem Industrial** (SENAI), *Brazil*

Languages

PORTUGUESE:	Mothertongue	FRENCH:	Intermediate (B1)
ENGLISH:	Fluent (C2)	SPANISH:	Intermediate (B1)
GERMAN:	Fluent (C1)	JAPANESE:	Elementary (*JPLT N4* Certificate)
		DUTCH:	Elementary (A2)

- Brazilian and German citizenship.

Technical Skills

PROGRAMMING:	C++ (11/14/17), C, Matlab, Python Frequent use of the *Qt* Framework (including QML)
EMBEDDED:	Arduino (boards and libraries), Raspberry Pi, BeagleBone ARM Cortex M0+/M3/M4 (Atmel/Microchip, STM32) and OpenOCD FreeRTOS, FreeRTOS+Trace
CAD:	Autodesk Inventor, Autodesk Fusion 360, SolidWorks, FreeCAD, MAX-PAC
EDA:	KiCAD, EagleCAD, Proteus
OTHERS:	Matlab/Simulink, LabView, GeoGebra, LaTeX Git and SVN version control systems Familiarity with POSIX systems Basic knowledge on Apache, MySQL and Wordpress
PROTOTYPING:	Practical experience with 3D printing and milling PCB Design, fabrication and soldering (SMD soldering/reflow)

Interests and Activities

Classical guitar, drums, didgeridoo, music production. Learning languages. Working on personal hardware and software projects.