




Miroslav Vitkov

Curriculum Vitae

TECHNICAL SKILLS

- MAJOR
- * **C++14** under procedural, object oriented or functional paradigm
 - * **C11** for μ C or ARM applications
 - * tools such as git, gitolite, cmake, teamcity, valgrind, clang-tidy, objdump
- MINOR
- * **python** for ML applications
 - * **bash**, the LFHS, standard utilities, security configuration and evaluation, unix sockets
 - * **TEX**
 - * basic electrical engineering - read a schematic, reason about it, use an oscilloscope, desing a filter
- MISC
- * **haskell** - below junior level
 - * **regex** - for capture groups
 - * Autodesk **inventor** - design a simple gearbox and simulate it
 - * **matlab** - programming, SimuLink modelling
 - * **R** - only worth for ggplot2
 - * **USB2** - bus firmware for a bare-metal device

 Sofia, Bulgaria
 +359 2 895 735 164
 sir.vorac@gmail.com

EDUCATION

- 2017 – 2019 **Machine Learning Scientist - dropped**
COGNITIVE SYSTEMS: LANGUAGE, LEARNING AND REASONING - DROPPED WITH
University of Potsdam, Germany
- 2007 – 2016 **Industrial Engineer**
BACHELOR THESIS: MULTITASKING AUTOTUNING PID CONTROLLER IN HEAT TRANSFER APPLICATION
Technical University of Sofia
- 2008 – 2010 **Physicist - dropped**
Sofia University Kliment Ohridski
- 2003 – 2007 **Communications technician**
HIGH SCHOOL DIPLOMA
Technical School of Communications, Sofia

COMMUNICATION SKILLS

- BULGARIAN C2: Native speaker
- ENGLISH C2: Fluent (Cambridge CPE)
- GERMAN A1: Basic

PROJECTS ON GITHUB

C++	face <i>Use OpenCV Haar cascades to identify persons.</i>
C++	rocks <i>Multiclass classification. Uses dlib.</i>
C++	silhouette <i>Human silhouette extraction using HOG descriptor, SVM classifier and adaptive background thresholding.</i>
C	micli <i>Micro CLimate controller, an autotuning PID regulator.</i>
C	megaboot <i>Simple atmega168 bootloader.</i>
C	cgetset <i>Generate getter/setter methods. Self-contained.</i>
PYTHON	rat <i>Encrypted chat infrastructure.</i>
PYTHON	rtplot <i>Realtime temperature plotting utility.</i>
PYTHON	gender <i>Guess the gender of the author of a short paragraph.</i>
BASH	scripts <i>Utilities for everyday use.</i>
HASKELL	voiceid <i>Identify different persons via speech.</i>
LATEX	rpg <i>A role-playing game.</i>
INVENTOR	gearbox <i>Gearbox calculation and technical drawings.</i>

WORK EXPERIENCE

04 JAN 2016 - 07 SEP 2017

Euro Games Technology

C++ Linux developer

Developing core functionality for a large C++ system, subject to certification, legislation and money handling. Some tasks:

- GNU utilities, Linux sockets, IPC, multithreading, bash scripting
- C++14, CMake, clang-tidy
- OpenGL, SDL2

Some projects:

- bill acceptor device firmware - handle money responsibly
- support and evolve a video API for about 200 internal clients
- script gitolite hooks and communicate their purpose to colleagues

20 MAY 2013 - 21 MAR 2015

Antelope Audio

C++ ARM developer

Implementation of a complex audio processing algorithm in C++ for ARM. Audio signal processing design (z-transform, filters, impulse response, amplitude and phase diagrams). GUI design with Python and Qt. OpenOCD and hardware considerations.

12 FEB 2013 - 13 MAY 2013

Johnson Controls

C embedded developer

Embedded C, concurrency, unit tests and documentation.

22 AUG 2011 - 15 JAN 2013

MM Solutions Ltd

C++ algorithms for Android

C++ with Boost, OpenCV etc. libraries for ARM. GNU/Linux and git. Digital video processing in 3D environment (quaternions, field of view, image recognition, gyroscopes).