




Miroslav Vitkov

Curriculum Vitae

TECHNICAL SKILLS

EXPERT	<ul style="list-style-type: none">* C++14 under procedural, object oriented and functional paradigms* C11 for μC and ARM applications* supporting tools git, gitolite, cmake, teamcity
PROFICIENT	<ul style="list-style-type: none">* python for ML applications* bash, the LFHS, most standard utilities, security configuration and evaluation, unix sockets* \LaTeX
EXPERIENCED	<ul style="list-style-type: none">* R* MatLab* digital and analog hardware design* USB, I2C, SPI firmware* Autodesk Inventor, SolidWorks, CATIA* SDL2, OpenGL* Haskell* OpenCV* PyQt* Deep learning* Computational linguistics

	Druzhba-2, Sofia, Bulgaria
	0895 735 164
	sir.vorac@gmail.com

EDUCATION

2017 – NOW	Machine Learning Scientist COGNITIVE SYSTEMS: LANGUAGE, LEARNING AND REASONING (MASTER OF SCIENCE) <i>University of Potsdam, Germany</i>
2007 – 2016	Industrial Engineer BACHELOR THESIS: MULTITASKING AUTOTUNING PID CONTROLLER IN HEAT TRANSFER APPLICATION <i>Technical University of Sofia</i>
2003 – 2007	Communications technician HIGH SCHOOL DIPLOMA <i>Technical School of Communications, Sofia</i>

COMMUNICATION SKILLS

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

PUBLIC PROJECTS

WORK EXPERIENCE

(clickable links)	C++	face Use OpenCV Haar cascade to identify persons.	04 JAN 2016 - 07 SEP 2017 Eute Games Technology C++ Linux developer
	C++	rocks Multiclass classification system using dlib.	Developing core functionality for a large C++ system, subject to certification, legislation and money handling. Some tasks:
	C++	silhouette Human silhouette extraction using HOG descriptor, SVM classifier and adaptive background thresholding.	- GNU utilities, Linux sockets, IPC, multithreading, bash scripting C++14, CMake, clang-tidy OpenGL, SDL2 Some projects:
	C	micli Micro Climate controller, support and evolve a video API for about 200 totuning PID regulator.	- bill acceptor device firmware - handle money responsibly
	C	megaboot Simple atmega168 bootloader.	- script gitolite hooks and communicate their purpose to colleagues
	C	cgetset Generate getter/setter methods. Self-contained.	20 MAY 2013 - 21 MAR 2015 Antelope Audio C++ ARM developer
	PYTHON	rtplot Realtime temperature plotting utility.	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.
	PYTHON	gender Guess the gender of the speaker of a short paragraph.	
	HASKELL	voiceid Identify different persons via speech.	
	LATEX	rpg A role-playing game.	12 FEB 2013 - 13 MAY 2013 Johnson Controls C embedded developer
	INVENTOR	gearbox Gearbox design and technical drawings.	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).