Miroslav Vitkov
Curriculum Vitae

TECHNICAL SKILLS

EXPERT	* C++14
	* C11
	* git
PROFICIENT	* (embedded) GNU/Linux, Bash scripting
	* python3, matplotlib, numpy, sklearn, pandas
	* CMake, GNU make
	* LaTeX
	* R
	* Bayesian inference
	* Markov chains, hypothesis testing
EXPERIENCED	* MatLab
	* digital and analog hardware design
	* USB, I2C, SPI firmware
	* Autodesk Inventor, SolidWorks, CATIA
	* SDL2, OpenGL
	* Haskell
	* OpenCV
	* pyQt
	* Deep learning
	* Computational linguistics

COMMUNICATION SKILLS

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

✎ Druzhba-2, Sofia, Bulgaria
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EDUCATION

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

PUBLIC PROJECTS

C++ **face**
Use OpenCV Haar cascades to identify persons.

C++ **rocks**
Multiclass classification. Uses dlib.

C++ **silhouette**
Human silhouette extraction using HOG descriptor, SVM classifier and adaptive background tresholding.

C **micli**
MIcro CLImate controller, an autotuning PID regulator.

C **megaboot**
Simple atmega168 bootloader.

C **cgetset**
Generate getter/setter methods. Self-contained.

PYTHON **rtplot**
Realtime temperature plotting utility.

PYTHON **gender**
Guess the gender of the author of a short paragraph.

HASKELL **voiceid**
Identify diferent persons via speech.

LaTeX **rpg**
A role-playing game.

INVENTOR **gearbox**
Gearbox design and technical drawings.

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 of the daily tasks include:
- GNU utilities, Linux sockets, IPC, multithreading, bash scripting
- C++14, CMake, clang-tidy
- OpenGL, SDL2
- Bill acceptor device fail-safe communication and control
- scripting for gitolite server administration

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).