

# Andrei Pavel

*curriculum vitae*

Bucharest, Romania

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<https://github.com/andrei-pavel>



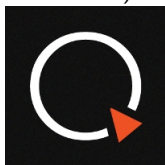
*working on Linux with C++, D, Dart, Flutter, Go, Rust  
'by the way I use Arch Linux' — geek meme ☺  
'Don't settle.' — Steve Jobs*

## technical skills

advanced C: C11, user-level, Arduino-dialect, OpenMP, MPI, pthread  
C++: C++17, STL, boost, CUDA, OpenGL, autotools, meson, lcov, cppcheck, clang-tools  
**Databases:** Cassandra, CouchDB, MSSQL, MariaDB, PostgreSQL, Oracle, Sybase, sqlite  
**Debugging:** cgdb, gdb, gdbgui, lldb, rr  
**Markup:** bpml, css, dtd, json, html, latex, markdown, xml, xsd, xsl  
**Go:** goroutines, reflection, BLE, ORMs, websockets, socket.io  
**Networking:** DHCP, DNS, TCP, UDP ip, iw, nftables, ss, tc, tcpdump, Wireshark  
**Operating systems:** Linux, bash, zsh, sed, ack, ripgrep, vim  
**Version control:** git  
**Virtualization:** Docker, docker-compose, Helm, Kubernetes, KVM, libvirt, virsh, QEMU

## work experience (5 years)

May 2016 —  
present  
(3 years, 6  
months)



**Software Engineer (formerly Junior C++ Developer), Qualitance, Romania.**

**Kea: open-source Linux DHCP server, C++, enhancements**

Pull requests to ISC (<https://github.com/isc-projects/kea/pulls?utf8=%E2%9C%93&q=is%3Apr+author%3Aandrei-pavel>).

- o **Cassandra** data sources
- o DHCPv6 features and features that help migrate to DHCPv6 e.g. lightweight-4o6 DHCP options
- o **Robot Framework** automated system-testing
- o live, persistent server reconfiguration
- o integration with Sysrepo data source, NETCONF protocol, YANG model


**Backend for Bullguard, antivirus for Mac OS X -> C++, unit tests**

- o scanning & quarantining of all file types
- o updating the virus database

**Runlock: smart-lock system**

- o BLE beacon advertising & GATT communication
- o Electronic access control of doorlocks using Assa Abloy protocol
- o REST


August 2014 — October 2015 (1 year, 2 months)

 **Associate Software Engineer, Misys Financial Software, Romania.**

Development of treasury and capital markets software

- Implemented support for Negative Rates in Money Market Rollover (3 months).
- Maintenance and bug-solving (12 months).
- Worked with services distributed using CORBA across Windows, UNIX, Solaris querying Oracle, MSSQL, Sybase databases.
- Developed business objects (C++) and front-end functionality (C#) for Summit.

June 2013 — October 2013 (3 months)

 **Software Engineering Intern, Intel®, Romania.**

Application development and performance optimizations in the high performance computing

Accomplishments:

- Contributed to the development of parallel applications designed to benchmark HPC devices.
- Benchmarked the Intel® XeonPhi™ coprocessor during the early days of its release.
- Used C, C++, OpenMP, native threading, low level intrinsics for more fine grained optimizations, Intel® vTune™ Amplifier for profiling and characterization studies.

## books

currently reading **The way to Go**, by Ivo Balbaert.  
<https://www.goodreads.com/book/show/13553772-the-way-to-go>

latest read **Seven Databases in Seven Weeks: A Guide to Modern Databases and the NoSQL Movement**, by Eric Redmond.  
<https://www.goodreads.com/book/show/25334471-optimizing-software-in-c>

more on Goodreads <https://www.goodreads.com/user/show/63238106-andrei-pavel>.

## portfolio

2019 **Radio România Actualități Podcasts**, Android app written in Dart with Flutter#.  
<https://play.google.com/store/apps/details?id=ro.radioromaniaactualitati.podcasts>

2017–2018 **portunus**, aggregates all package managers under one tool.  
<https://github.com/andrei-pavel/portunus>

2014 **Rapunzel**, simulation and rendering of hair in real time using GPGPU techniques.  
<https://github.com/andrei-pavel/rapunzel>

## studies

2010–2014 **Bachelor of Computer Science**, Politehnica University of Bucharest, Romania.  
 Automatic Control and Computer Science with major in Computer Systems Architecture

Thesis **Simulation and rendering of hair in real time using GPGPU techniques**  
 an algorithmic approach to the problem of real time simulation and rendering of hair in a highly-parallel multi-core environment