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%3AandreipavelQ).
- **Cassandra** data sources
- DHCPv6 features and features that help migrate to DHCPv6 e.g. lighweight-4o6 DHCP options
- **Robot Framework** automated system-testing
- live, persistent server reconfiguration
- integration with Sysrepo data source, NETCONF protocol, YANG model

Backend for Bullguard, antivirus for Mac OS X -> C++, unit tests
- scanning & quarantining of all file types
- updating the virus database

Runlock: smart-lock system
- BLE beacon advertising & GATT communication
- Electronic access control of doorlocks using Assa Abloy protocol
- 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 it's 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