Andrei Pavel

curriculum vitae



true-stack on Linux with C++, D, Dart, Flutter, Go, Rust

technical skills

advanced

Android: Java, Kotlin

C: C11, user-level, Arduino-dialect, OpenMP, MPI, pthread

C++: C++2a, casting, constness, dynamic loading, initialization order, inheritance, linkage, memory management, pointers, references, move semantics, preproessor, synchronization in concurrent programming, templates, STL, boost, CUDA, OpenGL, autotools, meson, lcov, cppcheck, clang-tools

 $\textbf{Databases} : \ \mathsf{Cassandra}, \ \mathsf{CouchDB}, \ \mathsf{MSSQL}, \ \mathsf{MariaDB}, \ \mathsf{PostgreSQL}, \ \mathsf{Oracle}, \ \mathsf{Sysrepo},$

sqlite

Debugging: cgdb, gdb, gdbgui, lldb, pdb, rr

Go: goroutines, reflection, BLE, ORMs, websockets, socket.io

Operating systems: Linux, bash, zsh, sed, ack, ripgrep, systemd, sys-v-init, vim

Markup: bpml, css, dtd, json, html, latex, markdown, xml, xsd, xsl, yang

Networking: DHCP, DNS, TCP, UDP ip, iw, netconf, netopeer, nftables, ss, tc, tcpdump,

Wireshark

Version control: git

Virtualization: Docker, docker-compose, Helm, Kubernetes, KVM, libvirt, virsh, QEMU

intermediate

C#: Windows Forms **D**: mixins, templates

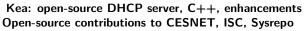
Flutter: asynchrony, Dart, generics, isolates, mixins, Provider

Rust: affine types, linkage, macros, mutability, object lifetime, unsafety

work experience (5 years, 8 months)

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

May 2016 — present (4 years, 2 months)



https://github.com/isc-projects/kea/pulls?q=author%3AandreipavelQ

- o https://github.com/isc-projects/kea/pulls?q=author%3Aandrei-pavel
- o https://github.com/sysrepo/sysrepo/pulls?q=author%3Aandrei-pavel
- o https://github.com/CESNET/libyang/pulls?q=author%3Aandrei-pavel
- https://github.com/CESNET/Netopeer2/pulls?q=author%3Aandrei-pavel
- Cassandra ODM with multiple data sources
- o DHCPv6 features and features that help migrate to DHCPv6 e.g. lighweight-4o6 DHCP options
- Robot Framework automated system-testing
- live, persistent server reconfiguration
- o integration with Sysrepo data source, NETCONF protocol, YANG model

Runlock: smart-lock system, development & deployment & unit tests

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

Bullguard: antivirus backend for Mac OS X, C++, unit tests

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

Associate Software Engineer, Misys Financial Software, Romania.

August 2014
— October
2015 (1 year,

Development of treasury and capital markets software

- o 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.



2 months)

• Developed business objects (C++) and front-end functionality (C#) for Summit.

Software Engineering Intern, Intel[®], Romania.

June 2013 — October 2013 Application development and performance optimizations in the high performance computing Accomplishments:

(3 months)



- o Contributed to the development of parallel applications designed to benchmark HPC devices.
- Benchmarked the Intel[®] XeonPhiTM coprocessor during the early days of it's release.
- Used C, C++, OpenMP, native threading, low level intrinsics for more fine grained optimizations, Intel[®] vTuneTM Amplifier for profiling and characterization studies.

portfolio

2019–2020 Radio România Actualităti Podcasts, Podcast app written in Dart with Flutter.

 $\verb|https://play.google.com/store/apps/details?id=ro.radioromania actual itati.pod casts||$

2018–2020 bash-boilerplate, bootstrap your bash project with this handy boilerplate.

https://github.com/andrei-pavel/bash-boilerplate

2018–2019 **go-boilerplate**, bootstrap your go project with this full-fledged boilerplate.

https://github.com/andrei-pavel/go-boilerplate

2014 Rapunzel, simulation and rendering of hair in real time using GPGPU techniques.

https://github.com/andrei-pavel/rapunzel

books

currently The way to Go, by Ivo Balbaert.

reading

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.

studies

2010-2014

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

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 highlyparallel multi-core environment