



Ioan Călin Borcoman

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21st March 1972

Married

I have been programming in C and C++ since 1995 and in Python since 1998. My main expertise is with C++, Qt6, Qt5 and QML for cross-platform, mobile and embedded development.

I am registered as a self-employed software developer in Romania.

**I only work remotely on hourly based projects.
My hourly rate is 60USD/h.**

SKILLS

Programming Languages:	C++ (very good) Python (very good) JavaScript (some)
Databases:	SQLite (some)
Operating Systems:	macOS, iOS, iPadOS GNU/Linux (Debian, Ubuntu, Fedora) Microsoft Windows Android
Frameworks/Libraries/ Tools:	Qt6, Qt5, QML2 CMake
Development Processes:	Requirements Gathering Object Oriented Analysis & Design Test Driven Development
Version Control:	GIT

EDUCATION

Master Engineering in Electrical and Information Engineering	1998 - 2001	Graduate School Of Engineering Hokkaido University, Japan
M. Sc. in Optics & Optical Technologies with Lasers & Plasma	1995 - 1996	Physics Faculty Bucharest University, Romania
B. Sc. Physicist Engineer	1990 - 1995	Physics Faculty Bucharest University, Romania

PROFESSIONAL EXPERIENCE

July 2011 / present

Borcoman C. Ioan-Calin PFA, Romania

Owner

Industry:

- Information Technologies

Roles/Responsibilities:

- Clients:
 - **MovetoDiscover, Italy (2021-2023)**
 - develop mobile app using C++, Qt5 and QML2
 - Tool/Technologies: C++, Qt5, QML2
 - **Sumit Kang, India (2020)**
 - develop a Qt5 timeline widget
 - Tool/Technologies: C++, Qt5
 - **Turtle Creek Software, USA (2020)**
 - develop a Qt5 GUI prototype
 - Tool/Technologies: C++, Qt5
 - **IoT Design SRL, Romania (2019)**
 - develop demo mobile app for setting and operating IoT light controllers
 - Tool/Technologies: C++, Qt5, QML2, QQuickControls2, Bluetooth, IoT, Android, iOS
 - **Touch2Success/UkTech, UK (2014-2016, 2019)**
 - port an electronic POS system, written with Qt4, from Windows to Linux
 - rewrite the e-POS from scratch, using Qt5 and QML, so that it works on Linux, Android and iOS, uses less resources and is faster
 - install and manage a bug tracking system for Touch2Success (using Redmine)
 - code review
 - Tools/Technologies: C++, Qt5, QML, Qt4, Android, iOS, Linux, Serial Port, Modem, Caller ID, Epson ESC/POS, Cups, Redmine, Azure
 - **Group Photo Software Inc, Canada (2018)**
 - develop the official macOS and Windows desktop application for uploading and downloading media (images, videos and audios) files to and from the GroupPhoto cloud service
 - develop the installers for macOS and Windows
 - configure automated builds with AppVeyor and Travis
 - Tools/Technologies: C++, Qt5, QML2, QQuickControls2, REST, Windows, macOS, Travis CI, AppVeyor, Inno Installer, git, github
 - **mbs Electronic Systems GmbH, Germany (2015-2017)**
 - add new features to a Qt4/QML1 application used to upload software to airplanes
 - port the above Qt4/QML1 application to Qt5/QML2 and update and extend its functionality and UI
 - Tools/Technologies: C++, Qt4, Qt5, QML, QQuickControls2, REST, embedded Linux, buildroot, Jenkins, Jira, git
 - **Ausdia, USA (2014)**
 - customized text editor based on QScintilla
 - interactive diagram editor
 - Tools/Technologies: C++, Qt4, QScintilla, Linux, Graphics View Framework, Adaptagrams
 - **Sectov, Netherlands (2013-2014)**
 - Windows SDK that allows easy content retrieval via a provided REST interface
 - BlackBerry 10 mobile app that retrieves and displays shopping coupons
 - BlackBerry 10 SDK that allows easy content retrieval via a provided REST interface
 - Tools/Technologies: C#, XAML, Windows Phone 8, Windows/PCL, C++, BlackBerry 10, Qt4, Cascades
 - **TCS Technologies, USA (2013)**
 - convert PyQt5 application to C++/Qt5 application
 - Tools/Technologies: C++, Python, Qt5, Linux, QWebKit
 - **H.R.Z. Software Services LTD, Israel (2013)**
 - controller application for an external medical application, using C++, Qt5 and DICOM (Digital Imaging and Communications in Medicine)
 - Tools/Technologies: C++, Qt5, Windows, DICOM
 - **Portolanos LLC, USA (2013)**
 - Shedskin and Python replacement modules for transparent integration of SDL
 - Tools/Technologies: Python, C++, SDL, Shedskin
- Personal projects:
 - *TaskTracker* (C++, Qt6, QML2) (2023)
 - *PenInspector* (C++, Qt6) (2022)
 - *Break Reminder* (Python3, PySide2, Qt5, macOS) (2020)
 - *Pimin* (Python3, Flask, HTML, CSS, JavaScript, Bootstrap) (2020)

- *Ison Assistant* (C++, Qt5, QML2, Android) (2015-2016)
- *Painter's Grid* (Windows Phone 8/C#/XAML) (2013)
- *Tip Calculator* (Windows Phone 8/C#/XAML) (2013)
- *Keep on Track* (BlackBerry 10/C++/Qt4/Cascades) (2012-2013)
- *Screen Check* (BlackBerry 10/C++/Qt4/Cascades) (2012-2013)
- *PlantUML QEditor* (Desktop/C++/Qt4) (2012-)
- *Quake Report* (Symbian^3/Maemo/C++/Qt4) (2011)
- *Simple XBMC Remote* (MeeGo Harmattan/Symbian^3/C++/QML) (2011)

Microsoft BizSpark (2011-2015)

Feb 2011 / June 2011	Altom Romania, Romania F-Secure, Finland	Quality Engineer
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Industry:

- Information Technologies

Roles/Responsibilities:

- develop automated test and performance tools in Python, for F-Secure

Technologies/Tools:

- Python, Linux, SCRUM, Jenkins/Hudson, SoapUI, git, Networking, Multiprocessing

Sept 2010 / Jan 2011	Alten Romania, Romania Lionbridge, France	Senior Software Developer
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Industry:

- Information Technologies

Roles/Responsibilities:

- develop and enhance the language translation server used by Lionbridge
- added a floating license mechanism to the login sub-system
- improved import and export of RTF documents containing Unicode style names

Technologies/Tools:

- C++, STL, Boost, Unicode, SVN, Linux

July 2008 / June 2010	ENEA Services Romania, Romania Axis Communication, Sweden	Senior Software Developer
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Industry:

- Information Technologies

Roles/Responsibilities:

- fix bugs in the firmware of embedded Linux network video camera and video servers
- develop automated test for Axis cameras using Python

Technologies/Tools:

- C, JavaScript, CGI, Shell Scripting, Python, TCP/IP, IPv6, CVS, GIT, Embedded Linux

Sept 2006 / June 2008	ENEA Services Romania, Romania Motorola DK, Denmark	Automation Software Developer
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Industry:

- Information Technologies

Roles/Responsibilities:

- develop tools for automated testing for Motorola mobile phones, using FitNesse, Python and PyFIT
- Symbian development

Technologies/Tools:

- Python, Fitnessse, PyFit, Unit Testing, Eclipse IDE, Embedded Systems, Symbian, Agile development, Perforce

Sept 2004 / Aug 2006	Schlund & Partner Romania, Romania	Team Lead / Software developer
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Industry:

- Information Technologies

Roles/Responsibilities:

- *technical lead for the Linux System Development Romania team (Nov 2005 – Aug 2006)*
 - gather requirements and estimate new change requests
 - manage the Romanian team and act as a communication hub between the Romanian team and the German one
- *software developer (Sept 2004 – Oct 2005)*
 - participate in the requirement gathering and design of a network distributed, reverse-incremental, backup system
 - design and implement the reverse-incremental backup algorithm
 - implement the authentication mechanism using OpenSSL

Technologies/Tools:

- Team Lead, Object Oriented Analysis & Design, Requirements Gathering, C++, Boost, STL, PKI, Multi-threading, OpenSSL, TCP/IP, Socket-programming, Fault-tolerant systems, Distributed systems, Client/Server, Backup, Subversion, Linux

Feb 2002 / Aug 2004 Unidec Computers SRL, Romania Software Developer

Industry:

- Information Technologies

Roles/Responsibilities:

- port a MIS (Message Information System) from SCO Unix to RedHat Linux, for NEC America
- implement the back-end configuration system, using a MySQL
- implement a gui front-end, using MFC and RogueWave's Sting Ray
- implement a tool for stress-testing the MIS
- visit a couple of times the offices from Texas, USA, as a liaison between our team and the American client

Technologies/Tools:

- C, C++, Python, MySQL, SQL, Linux, Windows, MFC, Subversion, CVS, Stress Testing

May 1995 / Sept 1998 Romanian National Institute for Laser and Plasma Physics, Romania Researcher

Industry:

- Plasma Display Research

Roles/Responsibilities:

- experimental research of plasma display electrical and optic properties
- 1D simulation of a plasma display
- software for A/D acquisition and GPIB oscilloscope communication

Technologies/Tools:

- C++, GPIB, Matlab, C++ Builder, OWL, Spectroscopy, Gas discharges, Plasma

OTHERS

Mobile Apps:

- *IsonAssistant (2015-2016)*
Ison Assistant presents the basic tones from the byzantine music, using the musical scales of Macarie Ieromonahul, Anton Pann, E. Konstantinou, linear and tempered.
Qt5, QML2, C++, Google Play
<https://play.google.com/store/apps/details?id=ro.borco.isonassistant>
- *Painter's Grid (September 2013)*
Mobile app to help using the "grid" drawing method, where you superimpose a grid over an image, in order to reproduce the image on another media.
Windows Phone 8, C#, XAML
<http://www.windowsphone.com/en-us/store/app/painter-grid/ca0a8ecd-cb70-4fe4-ac20-ab1058bdabc6>
- *Tip Calculator (May 2013)*
Mobile app that calculates tips and total check. Can split and group by persons.
Windows Phone 8, C#, XAML
<http://www.windowsphone.com/en-us/store/app/tip-calculator/6c7e06ba-de4e-4e96-8fc1-00ff256ace09>
- *Screen Check (January 2013)*

Fills device screen with uniform colors to inspect screen's uniformity and find dead pixels

BlackBerry 10, Cascades, QML, Qt4, C++

<http://appworld.blackberry.com/webstore/content/20078160/>

- *Keep on Track (December 2012)*

Personal time manager, written with BlackBerry 10 Cascades

BlackBerry 10, Cascades, QML, Qt4, C++

<http://appworld.blackberry.com/webstore/content/20384533>

OpenSource Projects:

- *TaskTracker (2023)*

simple task/time tracker

C++, Qt6, QML6

<https://github.com/borco/tasktracker>

- *PenInspector (2022)*

app to inspect a graphic stylus input

C++, Qt6

<https://github.com/borco/peninspector>

- *Break Reminder (2020)*

macOS break reminder

Python3, PySide2, Qt5

<https://gitlab.com/iborco-software/time-tools/break-reminder-python>

- *Pimin (2020)*

Flask app for powering off and rebooting a Raspberry Pi

Python3, Flask, HTML, CSS, JavaScript, Bootstrap

<https://gitlab.com/iborco-software/web/pimin>

- *PlantUML QEditor (August 2012 - Present)*

Editor for PlantUML, written with Qt

C++, Qt4, Qt5

<https://sourceforge.net/projects/plantumlqeditor/>

- *Quake Report (September 2011)*

Simple application that connects to USGS to retrieve the list of latest earthquakes and display them on an interactive map

C++, Qt4, Meego Harmattan, Symbian, Networking, Location, GPS, Maps

<http://sourceforge.net/projects/quakereport/>

- *Simple XBMC Remote (January 2011)*

a remote control written in C++ and Qt4, for Maemo5 and N900

<http://simple-xbmc-rem.sourceforge.net/>

- *ibocator (January 2010 – July 2010)*

CD/DVD/HDD cataloging tool in C++ and QT4, for Linux

<http://sourceforge.net/projects/ibocator/>

- *isohexengine (January 2007 – May 2007)*

isometric game engine, using SDL, in C++

<http://sourceforge.net/projects/isohexengine>

- *PyComicsViewer (December 2004 – March 2005)*

comic book viewer, using PyGTK

<http://sourceforge.net/projects/pycomicsviewer/>

Volunteering:

- *GNU/Debian Developer (active between 1998 – 2001)*

<http://www.debian.org/>

- *Nokia Qt Ambassador (2010 - 2012)*

Languages:

- English (advanced)

- Romanian (native)