

Karadzicova 31  
Bratislava 811 08  
Slovakia

☎ +421 908 048 265

✉ [alozj.kovacik@gmail.com](mailto:alozj.kovacik@gmail.com)

📄 [akovacik.com](http://akovacik.com)

<http://github.com/kovacik>

# Alojz Kovacik

---

## SUMMARY

Analytical software engineer with leadership skills, TDD practioner, with working knowledge of SCRUM methodology. Working on computer vision, 3D graphics and GIS domain.

Advanced C++ developer, experienced with WINSOCK network programming, code optimization and performance tuning including SIMD instructions and OpenMP. Expert in C#, .NET, and MS SQL with database analysis and design, worked on several .NET projects.

Interested in a challenging technical track career in an application development environment with main focus on C/C++ desktop, mobile or embedded hi-tech applications.

---

## WORK EXPERIENCE

2012 – 2013 **Software Design Engineer**, *Anasoft APR, s.r.o.*

MULTIPLAYER GAME SDK, MICROSOFT

- Worked as an outsourced SDET for Microsoft. This Windows 8 mobile SDK is being used by world-known gaming companies.
- Worked as Slovak test team lead for the last four months of the contract. The team consisted of 3 members.
- Design and implementation of C++ framework for multiplayer testing using WINSOCK2.
- Design and implementation of memory leak detection framework using CRT library.
- Participated in creation of functional, boundary, unit, load, memory, performance tests using TAEF and YMTF frameworks.
- Implemented native and managed framework for testing mobile offline functionality using WININET.

2010 – 2012 **Software Engineer**, *Softplan Slovakia s.r.o.*

#### INGRADA DESKTOP GIS SOFTWARE

- Participated on the UI and business logic creation in .NET framework using C#.
- Participated on the design and implementation of underlying database, which included optimization for spatial and search operations in MS SQL.
- Reverse engineered and optimized underlying CIL code that increased the speed of business logic operations by 60%.
- Optimized memory usage of the software using .NET memory profiler and Visual Studio built-in tools.
- Implemented AutoCAD and GEOgraf extensions using C++, COM and WCF.
- Participated on the design and implementation of FDO provider for geometry data access.

2007 – 2010 **Software Engineer**, *TopSoft BSB s.r.o., part-time contract.*

Participated on the creation of intranet systems using Entity framework, ADO.NET, MS SQL, HTML and AJAX technologies.

---

## EDUCATION

2008 – 2010 **M.S., Computer Graphics and Geometry.**

Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava.

Diploma Thesis: 3D modelling of solar radiation in urban areas.

2005 – 2008 **B.S., Mathematics.**

Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava.

Bachelor Thesis: Processing of GPS Data in Content Management System.

1997-2005 **Secondary education, Specialization - Programming.**

Gymnazium J. M. Hurbana in Cadca.

---

## PERSONAL PROJECTS

#### GEOMETRY DEBUGGER

- Implemented in C++ and DirectX 11 application containing renderer for debugging image processing, geometric, graph cut, triangulation and other computer graphics relevant algorithms.
- Implemented simple communication protocol for debugging from other processes using WINSOCK. Protocol is also suitable for large data sets used when rendering point clouds with millions of points.

#### DEEP ZOOM

- Designed and implemented application for loading and showing images of very big sizes.
- The deep zoom tree structure is created using WIC and speed optimization is made using OpenMP and SIMD instructions.

#### DEPTH MAP SNAPSHOT

- Designed and implemented extension for the Graphics debugger for creating snapshots of the render target.

#### CUSTOMIZABLE MFC PROPERTY GRID

- Created customizable MFC component for fast options dialog creation.

#### JOOMLA GPS TRACK PHOTO EXTENSION

- Implemented extension for importing GPS tracks and combining them with the photos according to the time of creation. The working version is available at <http://skpcadca.sk/index.php/trasy>.

#### JOOMLA RACE REGISTRATION EXTENSION

- Implemented PHP, MySQL based Joomla extension for sport race registration. Preview is available at <http://www.skpcadca.sk>.

#### WEBSITE NEWWAVE-MULTISPORT.COM

- As a sponsorship designed and created multi sports team website <http://www.newwave-multisport.com>.

#### WEBSITE SKPCADCA.SK

- As a sponsorship designed and created runners team website <http://www.skpcadca.sk>.

### LANGUAGE SKILLS

English	Professional working proficiency (12 years).
German	Limited working proficiency (2 years).
Czech	Full professional proficiency.

### DRIVING LICENCE

Type B, over 40000 km driven.

### REFERENCES AND LIST OF COMPLETED SUBJECTS DURING THE UNIVERSITY STUDIES

On request.

### UPDATED

April 26, 2013.