

ROLAND ATTILA KOVACS

Software Engineer



CONTACT

Phone number:
+36 20 5233532

E-mail:
hello@rolcsi.hu

Location:
6725 Szeged, Hungary

Web:
<https://www.rolcsi.hu>

ABOUT me

I am a software developer entrepreneur with 25 years of experience, open to new technologies.

- I develop native iOS applications in Swift and
- server softwares in Rust, C and Python
- As a programming mathematician, I also solve complex problems, e.g. generating parametric 3D models, optimizing algorithms, utilizing cryptographic tools
- I have experience in designing smart home systems using Fibaro, Home Assistant platforms, embedded hardwares and Z-Wave or Modbus protocol

PROFESSIONAL EXPERIENCE

HOME AND INDUSTRIAL AUTOMATION SYSTEMS *from 2024*

Co-owner and lead developer

- Integrating complex cooling/heating heat pump and ventilation systems into the Fibaro system using Modbus protocol in Lua language
- Heating/cooling automation, valve and thermostat control algorithm
- Building the infrastructure for the development, publication, documentation and licensing of our own software (rolcsi.hu)

METRIX INTERNET DESIGN GMBH *2021 - 2024*

Software Developer and Consultant *June 2023 - March 2024*

- maintaining existing ring profiles and developing new ones as needed
- researching new methods for promoting jewelry on the iOS platform

iOS Application Developer *November 2022 - May 2023*

- designing iOS app tools for custom engraving of rings
- implementing fingerprint reader, heart rate scanner and various image converters
- using native iOS development tools such as Xcode, App Store, SwiftUI, Metal

Senior Software Engineer *August 2021 - September 2022*

- designing and implementing a complete framework for generating a 3D model of an arbitrary parameterized ring surface
- determining the tools used as a basis - extending the Blender plugin called Sverchok in Python
- implementing the functionality of sverchok nodes in Rust and then binding them to Python
- development of an algorithm that allows fitting any motif to the parametric outer surface of any ring
- developing a Rust software that can process the node structure exported from Sverchok and generate 3D models without Blender or Sverchok
- developing a utility software that generates ring variants in batch mode based on specified parameter sets

METRIX HUNGARY KFT. *March 2019 - August 2022*

Software Developer and Consultant

- Design and implement algorithms in C that generate predefined ring profiles with predefined parameters.
- Port the entire framework to Rust.
- Use of microservice architecture.

TOPO GURU KFT. *April 2017 - August 2017*

iOS app and backend developer

- Topoguru mobile app basic version design and iOS app implementation
- backend database and communication interface development
- mobile app Facebook integration

ROLAND ATTILA KOVACS

Software Engineer

SKILLS

C, Rust, Python,
Deep Learning (Tensor Flow),
DevOps (Git, CI/CD, Docker),
iOS App (SwiftUI, Metal, AR),
Blender (Sverchok),
Linux, Shell script,
Embedded Systems (Arduino,
Raspberry Pi, Odroid, ESP32),
PHP, JavaScript

Language

English

HOBBIES

Squash, Aikido, rock climbing,
football, volleyball, guitar

PUBLICATION

Scientific Student Conference paper 2001

Encryption of communication in
medical IT systems

MORE

Driver License

B

HUM@NEY 2011 - 2019

Co-owner and developer

- Designing a method for secure, anonymous financial transactions using cryptography and blockchain tools
- Designing and developing a backend (BerkeleyDB) database and communication protocol in ANSI C
- iOS application for crypto wallet management and QR code-based transactions
- Practical application of a self-operated payment system as a loyalty point and paid parking system - website and iOS app (from 2015)
- Designing a Raspberry Pi-based license plate recognition hardware and parking administration system for closed parking lots (from 2017)
- Designing and implementing an event-driven server in C (from 2018)

UNITED RETAIL 2012 - 2015

PHP developer

- Developing new modules for the retail website built on the Symfony framework
- Maintenance, troubleshooting and repair of code
- Creating interactive animated advertisements in Flash

DUNAINFORMATIKA KFT. 2006 - 2010

Lead developer and software designer

- Definition of development guidelines
- Redesign of knowledge representation system
- Using Linux, Berkeley DB, development of multiprocess server application in ANSI C
- Development of Flash client application with skinnable user interface.
- Design and development of content management system in Flash CS3
- Development of WYSIWYG text editor in Flash
- Development of multithreaded server application in ANSI C
- Integration of Stanford, Relex and Freeling natural language analyzers to our knowledge representation system
- System administration: Linux Gentoo/CentOS/Ubuntu, Windows XP/7

TOTALZOOM KFT. 2001 - 2005

Lead developer and software designer

- Design and implementation of a web user interface in PHP and Javascript for a unique knowledge representation system implemented in Oracle
- Development of the user interface into an interactive 3D interface in Flash ActionScript
- Implementation of an XML-based network communication protocol on the server and client side.

STUDIES

University of Szeged 2003

Software Designer Mathematician

Ms.C degree

Artificial Intelligence specialization

Rudas High School 1997

Dunaújváros

Graduation, Informatics

specialization