

Stefan Gheorghe

Senior Software Engineer / Architect

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Altstätten SG, CH-9450



SKILLS

Core Programming

C# / .NET, C++

Tech stack

.NET 8, .NET 4.8, WPF, XAML, ASP.NET, Azure (Telemetry)

Databases

SQL (MSSQL, MySQL, CUBRID), MongoDB (NoSQL)

CI/CD Tools

TeamCity, Jenkins, GitHub, Tool Automation

AI & Scripting

LLMs, AI Agents, Python, TypeScript

LANGUAGES

English (professional)

German (B2, advanced)

French (advanced)

Summary

Software Engineer with over 20 years of experience specializing in high-performance backend systems, desktop applications, and database optimizations using C# and C++. Proven track record in complex navigation/guidance logic, core infrastructure development, and cross-platform architecture. Experienced in practical tool automation and integrating AI assistant capabilities into existing software products.

Algorithms, Data Structures, and AI enthusiast.

Experience

Senior Software Engineer

Leica Geosystems part of Hexagon

Oct 2019 – Present

Heerbrugg, Switzerland

- **Led .NET 8 Migration & Cloud:** Engineered core data-processing modules (C++ / C#) for Infinity Desktop; migrated platform from .NET 4.8 to .NET 8 and integrated Azure services
- **API Owner & Technical Lead:** Managed the REST API layer to expose desktop features; acted as primary technical contact and directly guided external integrators
- **Optimized CI/CD Pipelines:** Resolved build pipeline bottlenecks to improve software reliability and team productivity
- **Built AI Data Pipelines:** Led integration of an AI support assistant; designed and managed the underlying data pipelines and document ingestion

Software Engineer / Technical Project Leader

Leica Geosystems part of Hexagon

Feb 2016 – Sep 2019

Heerbrugg, Switzerland

- **Project Leadership & Development:** Guided the execution and timeline of the CLM licensing architectural overhaul while participating directly in C++ development and providing direct technical support to users

Algorithm Engineer

TomTom

Feb 2011 – Nov 2015

Berlin, Germany

- **Core Engine Engineering:** Contributed to the development and optimization of NavKit, TomTom's cross-platform navigation engine API, utilizing C/C++ across Linux and Windows
- **Guidance Logic Optimization:** Enhanced core routing and guidance components to significantly improve the accuracy, timing, and clarity of real-time driving instructions

Senior Software Engineer

Arnia Software

Feb 2009 – Feb 2011

Bucharest, Romania

- **Core Database Engine Development:** Contributed to the open-source CUBRID database project, utilizing C/C++ to implement relational engine features and enhance system capabilities
- **Query Engine Enhancements:** Architected and implemented hierarchical queries (CONNECT BY) within the database engine to support complex data relationships
- **Query & Index Optimization:** Optimized database indexing mechanisms and internal query execution structures to significantly improve data retrieval speeds and query performance

EDUCATION

Economic Informatics (Computer Science)

Academy for Economic Studies,
Bucharest, Romania

Oct 2003 – Jun 2007

Software Engineer

Bitdefender

May 2006 – Feb 2009

Bucharest, Romania

- Contributed to the development and maintenance of the Bitdefender Enterprise Management Console using native C++, Win32, and MFC framework

Software Engineer

Krogos Software

May 2004 – May 2006

Bucharest, Romania

- Contributed to the development and enhancement of the Visual Retailing commercial software product suite using Visual C++ and Visual Basic

Certifications

Coursera Certification in Machine Learning

Stanford University (July 2017)

Certified Scrum Master

Scrum Alliance (May 2012)

University Graduation Thesis (2007)

Voice-Controlled Navigation Engine

C#/.NET application that processes real-time vocal commands to control a simulated vehicle

- Engineered a custom speech recognition pipeline from scratch using Dynamic Time Warping (DTW) enhanced with Hidden Markov Model (HMM) concepts
- Implemented the core signal processing backend, including Fast Fourier Transforms (FFT) for audio analysis, spectrogram matrix generation, and dynamic programming algorithms

Awards

Competitive Programming

(2004–2009) Competed in online and offline contests like ACM-ICPC, Google Code Jam, and TopCoder

Romanian National Olympic Squad in Informatics

(2003) Qualified by ranking in the top 20 nationwide across all age groups

Side Projects

Continuous Tech Exploration

Engaging in various active side projects to implement and test the latest .NET, TypeScript/React, and Python ecosystems. Technical details and project updates are available upon request or at stefangheorghe.net.