

Curriculum Vitae

Artur Wroblewski

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Professional Summary

A software engineer with 27 years of professional experience in architecture definition, software design, and software development for financial, data processing, and GIS industries.

Experience in many technologies and programming languages

- object-oriented programming, functional programming, and scripting in Python, Cython, R, Scala, Java, C, Lisp, and Unix shell
- cloud infrastructure (AWS, Microsoft Azure, proprietary solutions)
- big data frameworks (Apache Spark, Cascading, proprietary solutions)
- SQL databases (PostgreSQL, Oracle, DB2, MS SQL, Netezza)
- NoSQL databases (Redis, HBase, proprietary solutions)
- messaging and streaming systems (RabbitMQ, ZeroMQ, JMS)
- web services (REST, SOAP, microservices)
- Unix and Linux systems

Employment

2024/02 — present, Bank of Ireland, Dublin Senior Software Engineer (contractor).

Design and prototyping of big data applications for Cloudera Data Platform and AWS.

Performance analysis and improvements of big data applications.

2021/12 — 2023/12, TD Securities, Dublin Senior Software Engineer (contractor).

Architecture, design, and prototyping of big data applications for Microsoft Azure cloud platform.

Performance analysis and improvements of big data applications. Improving security of web services and big data applications.

2020/09 — 2021/11, Truata, Dublin Senior Software Engineer (contractor).

Architecture, design, and performance improvements of big data applications (Microsoft Azure, IBM Cloud, Databricks, Apache Spark).

Definition and improvement of software development processes.

2018/05 — 2020/08, Dun & Bradstreet, Dublin Senior Software Engineer (contractor).

Architecture, design and performance improvements of AWS based big data applications.

Introduction of Scala language for basic big data analytics and tools.

2017/10 — 2018/05, Aon (ACIA), Dublin Senior Software Engineer (contractor).

Design, implementation and performance analysis of AWS based big data applications.

2012/08 — 2017/10, Bank of America Merrill Lynch, Dublin Senior Software Engineer (contractor).

Design, implementation and performance analysis of applications and databases. Big data processing and application data analysis using Quartz and Apache Spark frameworks.

2011/06 — 2012/08, Citi, Dublin Senior Software Engineer (contractor).

Design, implementation and performance improvements of Global Concentration Engine. Big data processing. System audit and functional analysis. Project governance improvements.

Reviews of design and code provided by external vendors.

2010/08 — 2011/06, IBM, Dublin Senior Software Engineer.

Design and implementation of geospatial architecture used by Intelligent Cities project applications. Development of Intelligent Cities project applications.

2005/06 — 2010/08, Mapflow/Avego, Dublin Senior Software Engineer.

Architecting, design and implementation of software projects related to Location Based Services (LBS), Road Network Performance (RNP) and Intelligent Speed Adaptation (ISA) projects for British Telecom, European Space Agency, European GNSS Supervisory Authority, Transport for London and Dublin Transport Office.

Cooperating with project partners and releasing software to customers.

2004/04 — 2004/08, Accenture, Wroclaw Senior Software Engineer (contractor).

Development of functionality of the bank system for LUKAS Bank SA (Credit Agricole group). Design and implementation of interfaces to external bank systems.

1999/05 — 2004/04, POS Experts Consulting (Carrywater Consulting), Wroclaw Senior Software Engineer.

Design and implementation of retail system for supermarkets and hypermarkets, which was integrated in the past with systems of Real hypermarkets (Metro Group).

Implementation of various modules of NetTeam workflow and helpdesk platform, which is used in several countries by LIDL supermarkets.

Requirements gathering, design and implementation of software to support stock and inventory management for Makro hypermarkets (Metro Group).

Development of Linux and JavaPOS device drivers.

2001/07 — 2001/08, Smart Systems, Wroclaw Senior Software Engineer (contractor).

Development of embedded device system based on GNU Linux operating system.

1997/01 — 1999/05, III Branch of PKO BP, Wroclaw Data Processing Inspector.

Administration of bank system, account day processing, data backup, selection and update of financial data for branch and inter-branch accounting.

Education

2014 — 2017 MSc with First Class Honours in Advanced Software Engineering, UCD School of Computer Science and Informatics, University College Dublin.

1999 — 2004 Bachelor of Science, Computer Science at Faculty of Computer Science and Management, Wroclaw University of Technology.

Publications

Z. Szpunar, A. Wroblewski. Object-To-Relational Model Mapping. Databases, Vol. 6. Wroclaw University of Technology, Wroclaw, 2005.

Free Software and Open Source Projects

2021 — present, RbFly Library for RabbitMQ Streams using Python asyncio.

2020 — present, VModeS Library for vectorized decoding of Mode S and ADS-B aircraft data.

The library decodes data such as callsign, position, or altitude based on the ICAO standard. It is designed for real-time, streaming, and batching applications.

2013 — present, DecoTengu Dive decompression library.

Library is implemented to experiment with various implementations of Buhlmann decompression model with Eric Baker's gradient factors.

2009 — present, Kenozoid Software to plan and analyse diving activities.

Design of architecture and implementation of the project. I am exploring possibilities of very granular component based architecture using Python language and integration with R (software for statistical analysis).