

Senior Software Developer

Dipl. Informatiker
TU Dresden

Software Engineer

with 12 years of software engineering experience

Key Areas of Expertise

Design and development of Client/Server systems incl. data modelling and user-interface design.

Model-based development with Xtext and Xpand

OOA/OOD, UML, Design Patterns

GUI test automation (Squish)

Programming languages: Java, .NET/C#, C/C++, PERL, Delphi, HTML, javascript, Abap, Octave

Web technologies and frameworks: Spring

Server -technologies: J2EE, EJB

Database systems: ORACLE incl. PL/SQL experience, SQL-Server, Sybase and MySQL

Tools: Eclipse EMF Ecosystem (incl. Xtext and Xpand), Together, Junit

Operating systems: UNIX/Linux and MS Windows

Cryptography and PKI infrastructure

Industry experience

Airline Industry

Manufacturing

Retail & Logistics

Image Processing

Time Management

Research

Examples of Realized Projects

Maintenance of a Software System for the Management of Spare Parts in an International Airline

Contributed to the maintenance of a logistics system for spare parts utilised by a large international and several smaller airline companies. The system controls and coordinates warehouse, order management and transportation systems. The task consisted in implementing several extensions with technologies like J2EE and JSF and supervising the migration of a Weblogic application server to a newer version including the adaptation of the scripts on the server. Additionally, PL/SQL mapping scripts had to be synchronized with the Java implementation. This could be automated thanks to the use of an Xtext based DSL.

Technologies: Java, J2EE, JSF, csh, Oracle PL/SQL, XText/Xtend2

Software System for Retail Logistics

The project consisted in re-implementing the purchasing system of a large retail company. A preliminary phase covered the implementation of a framework based on Eclipse and Spring. The subsequent phases aimed at delivering documentation and tests before the end of the project. The documentation was defined from a model of the GUI and generated with XSLT, the tests were implemented with the Squish tool. This project led to a master thesis with the title „Modelling of UI's and Tests with a DSL“ showing how the effort for documentation and GUI testing can be reduced dramatically with modelling.

Technologies: Java, JPA, Javascript, Spring, Xtext

Software System for the Testing of DRAM Memory Chips

Rework the logic test system for the memory chips of a major chip manufacturer. Engagement as a project manager and technical architect at a very early stage while coached by a mentor. Activities during the project covered writing specifications based on customer requirements, designing coarse-grained technical architectures, managing a development team in China, organising tests and delivery, managing and developing the integration of the final system.

Technologies: UML, Perl, Java, C++, TIBCO bus

Cost-Prototyping Software for the Manufacturing Industry

Cost-prototyping software calculates and optimises the production costs of products at design time. Beside the design and development of software, this re-implementation project produced the following results: A micro-kernel based application server, a DSL for the modelling of data models and a prototype for a data access layer. A central aspect of the new design was its fine-granular testing capability.

Technologies .NET/C#, SQL Server, Hibernate, UML

Software System for Bill Settlements in an International Retail Group

Development and maintenance of a bill settlement system. This system enables the 20 subsidiaries of a large retail group to centrally manage and coordinate all their purchasing discounts. The project tasks were located on the backend side and focused on the processing of parallel billing processes.

Technologies: SAP, Abap

Consultant Profile

Database Maintenance of a Time-Management System

In time-management setups, production processes are often modelled with tree-like data structures. A production plan for an airplane typically contains more than a million nodes. The goals of the project were on the one hand to automate the consistency check of the data structures that are stored in a database and on the other hand to reconstruct these structures if necessary. The existing reconstruction process could be accelerated by a factor of 60 thanks to improved resource management.

Technologies: Delphi, Oracle

Self-Learning Model for the 3D-Reconstruction of Faces

The stereoscopic reconstruction of surfaces from pictures of 2 cameras is a well-understood task. However, the reconstruction of surfaces from 2 pictures which - by principal - do not contain the full information is a real challenge. Within the framework of a master thesis a statistical model for the 3D reconstruction of faces was developed. The focus was on the teaching process that leads to the optimal model parameters and the challenges were the mathematical complexity and the implementation of stochastic processes.

Technologies: C++, Octave, povray, latex

Data Migration in a Software System for the Group-Wide Integration of Business Process in a Large Mail Order Company

Within the context of the migration to SAP, the remaining legacy systems had to be integrated. The task consisted of managing a 3-person team in charge of the data import during the cut-over-period.