

Experience

Sep 2017 - Present

Continental Automotive, Babenhausen, Germany - *Lead Architect, Technical Expert, Delegate*

Jul 2010 - Aug 2017

Continental Automotive, Singapore - *Principal Software Engineer, Technical Expert*

- Leading the design of a multi-threaded, highly-optimised, safety critical, HMI (GUI) framework for instrument clusters of upcoming high-end automotives, company's market and technology leading product, written primarily in C++, with a mix of C# and Python toolchain
- Working with real-time embedded OS (OSEK and Integrity), ACE, and in-house graphics library
- Immense development and testing experience with a huge number of modules and features over years, including window management, rendering optimisation & inter-thread communication
- Latest feature included a real-time scripting support, based in Lua
- Single handedly developed and promoted a domain-specific library of generic data structures and algorithms, resulting in widespread code reuse and readability improvements
- Revamped team's unit testing tools & conventions, making it more "fun" and resulting in reduced testing times
- Highly diverse team, frequent business trips and presently delegation to R&D HQ in Germany

Jan 2008 - Apr 2008

Software Engineering Lab, NTU, Singapore - *Lead Developer*

- Led a team of 10 through complete development life-cycle of the display component of a bus-service simulation software, rendering a real-time interactive 3D view of a city, written in Java
- Full system consisted of server-client distributed computer architecture of various components connected through Java RMI.

Education

Jan 2007 - Apr 2010

Nanyang Technological University, Singapore - *B.Eng. in Computer Engineering*

- Key / favourite modules: Graphics, Networks, Databases, Artificial intelligence, Neural Networks, Operating Systems
- Minor in Business studies

Skills

- Passionate about C++ (98 and modern), and experience with Template metaprogramming, STL, Boost
- Interest in both Object Oriented and Functional styles, with an eye for design patterns and clear code
- Knowledgeable in Graphics and UI frameworks
- Extensive experience with low-level optimisations and large-scale refactoring
- Languages (in order of expertise): C++, Lua, Python, C#, Javascript, Rust
- Testing: Unit with Gtest & Gmock, System with Robot
- Methodology: TDD, Agile, Scrum
- Tools: Visual Studios, VS Code, Git, Cmake, Jenkins

Interests

Computer Languages, User Interfaces, Artificial Intelligence, Ethics