Yan Zhao

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Background

Over 25 years of broad experience in professional software engineering and architecture. Published a Chinese book on C language "Drops of knowledge in C language"[1] and the book has been rewarded as one of the ten influential tech books in 2013 by CSDN that is the largest developer community in China. **Published an English Book** on C++ language "Drops of knowledge in C++ language(Sixth edition)"[2]. Translated the book "21st Century C: C Tips from the New School"[3] into Chinese, which has been published by China Machine Press.

All software products have been successfully applied in the market, and the ICSU software system has won first place in an international contest. I am proficient in developing real-time software, embedded software, low latency and high throughput software, and C/C++ compiler software, as well as skilled in designing algorithms to solve practical problems. Ten papers have been published, and a patent has been granted on an algorithm. As a full-stack programmer, I am proficient in OOD, UML, GIT, Linux, and database. Furthermore, I am interested in web development and have built a computer knowledge website: XinZhi Website[4].

Education

2005	Doctor of Computer Science, Harbin Institute of Technology
1999	Master of Electrical Engineering, Harbin Institute of Technology
1997	Bachelor of Electrical Engineering, Harbin University of Science and Technology

Employment

2021 - present	Senior C++ embedded developer, Terumo BCT, Denver, CO USA
2018 - 2021	C++/Python trade developer, JPMorgan Chase Bank, Houston, TX USA
2016 - 2018	C++/Simulation Engineer, NASA, Houston, TX USA
2014 - 2016	Researcher Engineer, University of Houston, Houston, TX USA
2010 - 2012	Lecturer and Chief of Teaching and Research, School of Software in Harbin Institute of Technology, Harbin China
2007 - 2010	Research Engineer, University of Groningen, Groningen Netherlands
2005 - 2007	Researcher Scientist, Research and Development Center Toshiba (China) Co., Ltd., Beijing China

1 http://www.amazon.cn/tushu/dp/B00FG1RWJA
2 https://www.amazon.com/dp/B01ETXWMKO
3 https://www.amazon.com/21st-Century-Tips-New-School/dp/1491903899/
4 http://zhaoyan.website/index.shtml

Software Products: Details(demos) are available at: http://zhaoyan.website/zy/project_e.shtml

Senior C++ embedded developer @Terumo BCT	Based on ARM Cortex-M architecture, develop firmware for medical devices. − High reliability requirements, communicate based CAN Bus. − Docker compiling environment. − Use C/C++ language, BDD based on ctach2 and pytest.
C++/Python Trade developer @JP Morgan Chase	Working in the Athena trading platform and develop low latency, high throughput applications in the Post-Trade Regulatory department. − My work involves analyzing and evaluating deal data, with a focus on all kinds of FX deals that are booked by a large population every day.
C/C++ developer @NASA	Working in a NASA confidential project, this is based on Trick simulation environment and Core Flight software. − Developed the C++ Engine and a C/C++ Mathematics and Statistics Library to compute all simulation logics in back-end for highest performance.
C++ Compiler Researcher@ University of Houston	C++ compiler project, converting Whirl IR in Open64 compiler to LLVM bitcode in Clang compiler. − Need to understand LLVM language in Clang compiler. − The whole project is developed in C/C++ language.
Researcher Scientist @ Toshiba (China) Co., Ltd.	Chinese parser that combines head-driven statistical model and linguistic rules − The parser can output both phrase structure trees and dependency trees as a key component in Machine Translation (MT) system − Developed in C/C++ language under both Linux and Windows system. − Proposed and developed a Chunker that was based on Rough Set. Based on this research, a patent titled "A Chinese base noun phrase identifying method based on Rough Set" was granted. − Machine Translation (MT) system has come into market in Japan.
Ph. D. Candidate @ Harbin Institute of Technology	ICSU Morphology Analysis System − As vast and comprehensive nature language processing software, it includes dictionary module, language model module, smoothing module and disambiguation module. The system can segment Chinese word, tag POS and recognize Name Entity. − Software developed in C++ language and STL, with the principle algorithms of some smoothing algorithm, such as Katz smoothing algorithms, some path optimization and discriminative algorithms, such as Maximum Entropy and SVM. The assistant tool software was developed by Perl language. − In 2003, the ICSU achieved the best result in segmentation disambiguation test, which is organized by the State High-Tech Development Plan (The 863 program) in China. In addition, in the second international Chinese word segmentation bakeoff held by ACL Special Interest Group on Chinese Language

Processing (SIGHAN). ICSU won the [best performance on Microsoft Corpus](#)[5].

Master Student @ Harbin Institute of Technology	Automatic Monitoring Device for Axle Temperature Alarm − Device was designed to monitor the temperature axle of a train and has been used in Harbin Railway Bureaus − Hardware of device includes Single-Chip Microcomputer, Switching Mode Power Supply and temperature sensor. Software was written in MASM language, (Firmware in EPROM which demands high accuracy). Software of Experimental Platform of Three Valves and Poles − Platform used to test valve pressure requirements and responding time, and has been applied in Harbin and Mongolian Railway Bureaus. − Real-Time industry controlled software. All interface components were created based on Microsoft ActiveX (COM) technology. Multithread programming made it possible to sample and show data at the same time. The software was developed in C++ language and MFC on Windows platform.

Teaching Experience

Harbin Institute of Technology	C Language - Exceptional A+ performance, award of excellence selected as Chief of Teaching and Research

Professional Activities

Microsoft Technology Club	Appointed as First Chairman of Microsoft Technology Club in Harbin Institute of Technology. Supervised students to join the NET international competition. A silver medal and the best Building Award received.

References

Reference letters and contact information are available upon request.

[5] https://pdfs.semanticscholar.org/65e9/0d9f6754d32db464f635e7fdec672fad9ccf.pdf