

Zhijie (ZJ) Lan

C++ Developer

I am an experienced developer with over 5 years of expertise in building Linux and Windows software with C++, Python and more. I'm also passionate about game development, actively honing my skills in Unreal Engine and Unity to create immersive gaming experiences. Explore my personal portfolio at <https://zj-lan.github.io/> to view my work.



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github.com/Zj-Lan

SKILLS

C/C++

Python

Unreal Engine

Java

C#

Unity

Linux

Database

SQL

Git

Version Control

Agile Development

Software Design

Data Analysis

Machine Learning

Web Applications

WORK EXPERIENCE

C++ Developer

Morgan Stanley

07/2021 - 07/2023

Montreal, QC

Multinational investment bank and financial services company headquartered at New York.

Achievements/Tasks

- Independently developed and maintained the **C++** software of Speedway, a platform for low-latency high-frequency trading services, utilizing algorithms and modern C++ optimization techniques (**Multithreading**, **Template Metaprogramming**, **CRTP**, **Move Semantics**, etc.) for efficient parsing and processing of trading orders.
- Collaborated within an **agile** environment with multiple developers, QAs, and integration engineers to successfully launch and maintain trading systems in production **across global** trading markets in Europe, America, and Asia, covering **8 different** trading protocols.
- Participated in the **ground-up development** of 3 systems targeting new trading protocols, taking **full responsibility** of **C++** software development, code design for new requirements and features, as well as the design and implementation of **automated testing** frameworks in **Python**.
- Mentored** 2 newly onboarded junior developers, creating instructional materials to facilitate their rapid acquisition of essential knowledge in work, including advanced syntax and debugging of the **C++** codebase, utilization and code structure of **Python** automated testing frameworks, **Linux** system essentials, **Git** version control, **network packet analysis** and more.
- Led the upgrade of the automated continuous delivery system for the team's projects, establishing **release pipelines** using the latest version of **Jenkins** as well as optimizing release scripts and **Jira workflows**, which significantly enhanced team productivity.

Software Engineer

Wisesoft Co., Ltd.

09/2015 - 01/2019

Chengdu, China

Wisesoft, listed on the SZSE (Stock Code 002253), is a leading technology firm providing proprietary solutions in China's civil aviation markets.

Achievements/Tasks

- Independently developed and maintained the client-side desktop software for the **Air Traffic Control Automation System** (worth about **\$3 million USD**).
- Designed and developed the **C++** software deployed in **10+ airports** across China, which can dynamically **parse** and **visualize** radar data of thousands of flights.
- Installed and configured the operating system (**Windows/Linux**) and **database** (Oracle) for the LAN system (**10+ servers** and **50+ clients**) of the software.
- Handled more than hundreds of client needs, new features, and bugs of the software.
- Awarded **The Best Employee** of the Year 2016 (10 out of 300 employees), 01/2017.

EDUCATION

Master of Applied Science in Computer Engineering

Memorial University of Newfoundland
2019 - 2021 St. John's, NL

- GPA: 3.88/4.0

Bachelor of Engineering in Telecom Engineering

Chengdu University of IT
2011 - 2015 Chengdu, China

- GPA: 3.1/4.0

PERSONAL PROJECTS

Unreal/Unity Game Development

- C++ / C#
- Designed and developed **6 game demos** across various genres using **Unreal/Unity**. For a closer look, please visit my portfolio website.
- Leveraged **C++**, **C#**, blueprint scripting, blend spaces, inverse kinematics, and various engine tools in game demos to present engaging gameplay, including enemy **AI**, character **animations**, and **physics** simulations.

Animated Presentation Canvas

- Java / Swing / UI
- Designed and developed **Java** presentation software from the ground up with a primary focus on advanced **2D animation features** inspired by Prezi, Keynote, and PowerPoint.
- Applied interpolation and **geometric mathematics** to **object-oriented 2D shape classes** to enable seamless animations for a range of attributes, including position, shape, and color.