

# Zhijie Lan

## Software Engineer

I am a passionate Software Developer with 3+ years of experience in building Windows and Linux applications for the Air Traffic Control Automation System with C++ / Qt and more. In addition, I am also a video game enthusiast who keeps learning game development skills and aspiring to get into the game industry.



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## SKILLS

C/C++

Java

Python

Unity

Unreal Engine 4

C#

Linux

Database

SQL

Git

Software Design

Version Control

Data Analysis

Machine Learning

Web Applications

## LANGUAGES

English

Full Professional Proficiency

Chinese

Native or Bilingual Proficiency

## INTERESTS

Video Games

Electronics

Basketball

Snowboarding

## WORK EXPERIENCE

### Software Engineer

#### Wisesoft Co., Ltd.

09/2015 - 06/2019

Chengdu, China

Wisesoft, listed on the SZSE (Stock Code 002253), is a leading tech company providing proprietary solutions in China's air traffic markets.

##### Achievements/Tasks

- As a core programmer of the department, independently developed and maintained the client-side software of the *Air Traffic Control Automation System* (worth about **\$3 million** USD).
- Designed and developed **C++/Qt** software deployed in **10+ airports** across China, which can dynamically **parse radar** data of thousands of flights and **visualize** speed vectors, flight routes, hazard warnings, topographic maps, etc.
- 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 500 employees), 01/2017.

## ACADEMIC AND PERSONAL PROJECTS

### PreZoom, Presentation Software with Animation (09/2020 - 12/2020)

#### Java / Swing / JUnit / GUI

- Developed a presentation application based on **Java Swing GUI** that combines features of PowerPoint, Prezi, and Keynote. (**The Best Software Award**, 1 out of 12 groups)
- Designed the whole structure of the software, wrote **JUnit** automated tests for the program, and finished most of the documentation.
- As the **team leader**, divided programming tasks and assigned jobs to teammates, and managed the **git** repository and version control.

### Unity Game Development (2020 - Present)

#### C# / Unity

- Developed a 2D platform game, a third-person adventure game, and a first-person shooting game.
- All game demos can be played online (find my ePortfolio link on the left).

### Vehicle License Plate Recognition (05/2020 - 08/2020)

#### C++ / OpenCV / Machine Vision

- Developed an image processing program that can extract characters of vehicle license plates from images.
- Used **OpenCV** to preprocessing original images to locate and extract plate images.
- Used a pre-trained **KNN** model to recognize characters from plate images.

### Marine Mammal Sound Classification (09/2020 - Present)

#### Python / Machine Learning

- Fetched audio data, and built metadata for all audio files for machine learning and deep learning.
- Used **Python**, **Pandas**, **Librosa**, and **Scikit-Learn** in **Jupyter Notebook** to build machine learning models.
- Explored and learned different algorithms of machine learning and deep learning, and used **Keras** and **Tensorflow** to implement deep learning methods.

## EDUCATION

### Master of Applied Science in Computer Engineering

#### Memorial University of Newfoundland

09/2019 - 04/2021

St. John's, Canada

##### Achievements

- GPA: 3.88/4.0

### Bachelor of Engineering in Telecommunications engineering

#### Chengdu University of Information Technology

09/2011 - 07/2015

Chengdu, China

##### Achievements

- GPA: 3.1/4.0

- Outstanding Leader of Student Union