

# LI Lun

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## EDUCATION BACKGROUND

**Tiangong University**

09/2021- 06/2025

- **Degree:** Bachelor of Engineering
- **Major:** Artificial Intelligence
- **GPA:** 84.4/100

## INTERNSHIP EXPERIENCE

**Tianjin Changsuo Software Technology Co., Ltd.**

25/07/2024-25/08/2024

*Test Intern*

- Generated test reports by applying Python script, and presented the test result and trend analysis through data visual tools like Matplotlib or Seaborn;
- Developed automatic test script by applying tools like Selenium and Appium to improve test efficiency and accuracy, participated in the building and maintenance of the automatic test framework to ensure the repeatability and expandability;
- Applied defects tracking tools JIRA to record, track and manage software system defects to ensure timely remediation and validation.

**Chengdu Running Rhino Technology Co., Ltd.**

25/06/2023-25/08/2023

*Data Management Engineer Assistant*

- Assisted the data management engineer to design, manage and optimize the database system;
- Mastered data modeling and data warehouse technologies and the related storage backup, recovery and security management technologies.

## RESEARCH&PROJECTS

**Algebraic Modelling and Analysis for Logical Finite State Machine in the Channel Network Structure**

*Member*

05/2024-Present

- Joined in the related theoretical research, explored the characters and behaviors of the logical finite state machine;
- Analyzed the mathematical characters of the logical finite state machine, deduced the performance and index to provide theoretical support to the project;
- Participated in developing the algorithm and tools for analyzing and verifying finite state machine models, encoding to achieve functions like model verification, performance evaluation and simulation to guarantee the accuracy and reliability of the finite state machine;
- Joined the discussion and cooperation in the team, cooperating with other members to solve problems and overcome challenges;
- Communicated with other members to coordinate the progress to make the project to proceed successfully.

**Python-Based Perceptron and Neural Network Model Simulation Experiment**

2024.03-2024.04

*Member*

- Wrote the corresponding python program according to the perceptron and neural network to further understand the mathematical core of the deep learning technology;
- Preliminarily learned the training process of the neural network and perceptron and understood the basic technical process in deep learning.

**MNIST Handwritten Numerals Recognition Based on Four-layer Connected Neural Network**

*Member*

2023.10-2023.11

- Debugged the related python codes, understood the process of establishing the neural network with backpropagation function from the bottom, and understood the basic operation of dataset;
- Wrote forward and back propagation layers for different operations based on the type characters of the python language;
- Set up the optimization algorithm like SGD and Adan, and trained the four-layer neural network in the MNIST dataset;
- Established processes including establishing dataset, uploading dataset, initializing weight solver, setting loss function, updating weight solver, conducting circuit training, storing models, etc., to achieve network training.

**TS Fuzzy Control Inverted Pendulum System**

2024.04-2024.05

### *Member*

- Established fuzzy rules to describe the dynamic characters of the system through the input of the fuzzy system and the state variables;
- Designed a fuzzy controller to control the inverted pendulum system based on the fuzzy rules and fuzzy reasoning;
- Verifying the fuzzy controller's performance in real application through experiments and further improved the control algorithm.

### **Flexible Mechanical Hand Dynamic Model Parameter Identification**

2023.10-2023.12

#### *Member*

- Designed the control algorithm and trace planning methods by accurately understanding the dynamic characters of the flexible mechanical hand to improve performance and flexibility of the mechanical hand;
- Utilized dynamic model parameters to establish the simulation models of the mechanical hand, and evaluated the effect of different control strategies through virtual experiments.

### **Four-rotor Aircraft Modelling and Parameter Identification**

2024.04-2024.05

#### *Member*

- Used suitable sensors or simulation software to collect the data of the four-rotor aircraft, including postures, angular speed, pushing force, and motor speed to guarantee the data sampling frequency was high enough to capture the system dynamic characteristics;
- Conducted pre-processing for the collected data through Matlab, including data cleaning, denoising, interpolating, etc., to guarantee the accuracy and consistency of the data;
- Established mathematical models by using Matlab based on the physical theories of the four-rotor aircraft;
- Identified the collected data by Matlab and utilized suitable statistical methods to estimate the parameter value in the mathematical models
- Verified another part of data by using the identified models, and evaluated the estimated performance of the models;
- Compared the difference between the model estimated data and real data as well as the generalization ability of the models to the new data.

## **COMPETITIONS**

China International College Student Entrepreneurship Competition, an Intelligent Monitoring and Firefighting Electric Carport

06/2024

#### *Group Leader*

- Determined the technical direction of the project, and defined the core technology;
- Deeply understood the technical development situation of the current fields;
- Conducted market survey, and understood the target audience and the scale, increase trend, competitors of the target market;
- Produced a PPT, including project introduction, market analysis, technical solution, business mode, etc.

## **EXTRACURRICULAR ACTIVITIES&COMPETITIONS**

Psychodrama Competition in TJPU

#### *Director*

- Arranged the story line, character development and dialogue;
- Guided the shot selection, camera angle and camera motion;
- Managed the whole production team, guided performance of the actors;
- Arranged rehearsal, provided feedback and guide; and established relationship with the actors.

## **OTHER SKILLS**

- **English Proficiency:** Proficient in listening, speaking, reading and writing
- **Computer Skills:**
  - **Programming:** Python (3years), C (3 Years), C++(3 Years), Matlab (3Years)
  - **Database:** MySQL Database (2 Years)
  - **Sorting Algorithms:** QKSORT, merge sort, heap sort, etc;
  - **Search Algorithms:** binary search (2years);
  - **Machine Learning Algorithm:** linear regression, logistic regression, decision-making tree, KNN, K-mean clustering, Neural Network;
  - **Deep Learning Framework:** PyTorch (1year).