Yunfan. **Li**

Student · Software Engineering - Data Science

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"Somewhere between the bottom of the climb and the summit,
is the answer to the mystery why we climb."
-Greg Child

Education

Fudan University — *Shanghai, China*

B.S. in Software Engineering — *Sep. 2016 - May. 2021*

- TOEFL **112**; GRE **326+3.5**;
- GPA **3.28/4.0**
- 2018 whole year, **Teaching Assistant** for ***Introduction to computer systems*** (adaptation of CMU-CS213)
- Fall of 2018, **Exchange** at **the University of California , Santa Cruz (UCSC)**

Publications

Combined priority and path planning with a double-layer structure for multiple robots — *SJTU*

Second author — *Dec. 2019 - Jan. 2020*

- 2020 IEEE International Conference on Advanced Robotics and Mechatronics (ARM)
- We propose a double-layer approach that combine priority planning and path planning to obtain optimal priority and lower paths cost. A modified A* algorithm is introduced to obtain collision-free paths considering priority configuration.

Honors & Awards

Domestic

2020.4	**Third Prize,** Fudan University Graduation Scholarship	*Data Science@FDU*
2019.12	**Second Prize,** National Mathematical Contest In Modeling	*Shanghai*
2017.11	**Third Prize,** Fudan University Scholarship	*Software Engineering@FDU*
2017.04	**Star of the Future Award & Third Prize,** * CTF Information Security Competition	*FDU*
2017.03	**Third Prize,** Shanghai/Dublin Clover Software Development Innovation Competition	*Shanghai*

Research Interest

Computer Vision and Robotics

- with an emphasis on 2D/3D Human Pose Estimation

Research Experience

VideoLab [With Prof. Yao Wang] — *NYU Tandon*

Remote Research intern — *June. 2020 -*

- Worked with Zhipeng Fan on 3D Human Pose Estimation through Lifting and Weakly Supervised Methods. To produce a co-authored article.

RobotLab [With Prof. Qixin Cao] — *SJTU*

Research intern — *Oct. 2019 -*

- Worked with Haili Wang on path planning for multi-robot scene. Have a co-authored article.
- Now working on a project regarding the smart-rehabilitation-system. Fields related are human pose estimation and human action evaluation. Using some recommendation algorithms learned from school.

Future Network Innovation Laboratory [With Prof. Yang Xu] — *FDU*

Research intern — *Apr. 2019 - Oct. 2019*

- Researched into ways to model cache replacement algorithms to speed up simulations, to recognize request patterns and to find ways (mainly cache pollution attacks) to disrupt the locality of CDNs and corresponding countermeasures.

System Security Lab [With Prof. Yuan Zhang]

FDU

Research intern

Sep. 2017 - May. 2018

- Researched into the topic of Javascript RFCs through vulnerable WebView component in android systems.

Internship

XMov.ai

Shanghai

Computer Vision Algorithms Engineer Intern

Sep. 2020 -

- Centering the Problem of Enhancing Pose Driven Avatars. Mainly doing Pose to Mesh Algorithms Development, Fine-tunning SMPL-family Models.

ChenXi Studio

Shanghai

Backend engineer intern

June. 2018 - Sep. 2018

- Helped with the development of a project website that involves generating and returning user-information-related-pictures, had 600+ users.

School Projects

Gomoku on piskvork| Gomoku agent implemented with MCTS

FDU

Artificial Intelligence (Group Work)

2019.06 2019.06

- ADP; Threat-space search applied.

Collaborative Filtering Movie recommendation algorithms

FDU

Social Network Mining (Group Work)

2019.06

- Using web crawlers to gather data (from Douban) and multiple recommendation algorithms to make reasonable choices of recommendation to users.

[Kaggle] Box office prediction

FDU

Statistical machine learning (Group Work)

2019.06

- Fine Tunning LightGBM for prediction.

WebGL project

FDU

Computer Graphics

2018.06

- Draw a scene with WebGL, user keyboard event to achieve camera perspective change and omnidirectional movement
- Realized keyboard event control object visibility and transformation.

Chinese ancient poetry generation

FDU

Neural Network and Deep Learning (Group Work)

2018.06

- TensorFlow, LSTM.

2048 games

FDU

Object-Oriented Design

2017.12

- A C++ QT-based GUI2048 game, DFS AI.

Chess AI

FDU

Data Structure and Algorithm Design

2017.12

- min-max search, alpha-beta pruning, search layer: 4.

CLI multi-threaded chat room

FDU

Computer System Foundation (2)

2017.12

- Pure C, thread pool monitoring message, socket transmission.

Image sharing website

FDU

Introduction to Web Applications

2017.06

- PHP + MySQL as backend. HTML, CSS, JavaScript as frontend. User authentication with cookies, encryption hashing with salt.

Program Committees

2016-2018 **Member,** ****** CTF team of Fudan University *CTF*

2019 Fall - **Minister of Academics,** Students' Union under department of Data Science, FDU *FDU*

Related Courses

Graphics and Vision

- Computer Graphics
- Computer Vision
- Stanford-CS231n (self-learned)
- An Introduction to Object Detection and Segmentation(self-learned)

Advanced Data Science

- Large-scale Distributed Systems
- Advanced Data Science
- Data Visualization
- Statistical Machine learning

Machine Learning

- Neural Network and Deep Learning
- Artificial Intelligence (Reinforcement Learning)
- Social Network Mining
- Optimization Methods

Advanced Computer Science

- Introduction to Computer Systems (Adapted from CMU-CS213)
- Database Optimization and Implementation
- Large-scale Distributed Systems

Adcanced Statistics

- Statistics: Principles - Methods and R
- Computational Statistics
- Bayesian Data Fusion
- Financial Data Analysis
- Financial Time Series

Math & Physics

- Advanced Mathematics A
- Discrete Math
- Linear Algebra
- College Physics B

Programming

- Programming Basics (Java)
- Data Structure and Algorithm Design (Python)
- Object-Oriented Programming (C++)
- Introduction to Web Applications (PHP+JS+HTML+CSS)
- Software Engineering (Java)