## Yongwei Gu

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**Education:** Shanghai University of Finance and Economics

School of Information Management & Engineering

Bachelor of Computer Science, Sep 2020 – Jun 2024 (Expected)

• Overall GPA: 3.44/4.00; 85.39/100; Rank: 5/44

• Relevant Courses:

Advance Program Designing and Experiment: 90

Discrete Mathematics: 92

Data Structure: 95

Python Program Design: 98.2

Optimization Theory and Algorithm: 94 Algorithmic Design & Analysis: 95

• Honors: Second-class People's Scholarship

Experience: Jun 2022

## **Optimization Theory and Algorithm Final Project**

Yang pu, Shanghai

Yang pu, Shanghai

A linear programming solver using simplex algorithm

 Developed a linear programming solver using the bounded-variables simplex method with Python (Numpy) that referred to Matlab's linprog function; Designed the visualized solution by printing out the simplex tableau.

Several empirical risk minimizations with linear predictor

Github: https://github.com/Sh1nyruo/Sufe-ConvexOptimization.git

- Minimized £2-regularized logistic regression with sigmod loss and £2-regularized support vector machine (SVM) with hinge loss (squared hinge loss) using gradient descent method, FISTA, Newton's method, subgradient method, ADMM, proximal gradient method and FISTA with restarting strategy.
- Painted several figures to compare the performance of different methods.

Oct 2022

# Software Engineering Project

Yang pu, Shanghai

# A Functions Calculator with Memo Management

Github: https://github.com/newt-rgb/StackOverFlow.git

- Designed a functions calculator with factorial, sin, cos, etc.
- Implemented a memo management system which can send toasts on Win10/11.
- Visualized the GUI with PyQt5.

Oct 2022-now

#### **Artificial Intelligence Project**

Yang pu, Shanghai

Github: https://github.com/Sh1nyruo/Sufe-AI.git

• Built an program (in Python) for Othello game, which used a heuristic search algorithm (Alpha–beta pruning) to beat opponents.

Oct 2022-now

## **Some Self-learning Courses**

Yang pu, Shanghai

- UCB CS169: software engineering
- UCB CS188: Introduction to Artificial Intelligence
- UCB CS189: Introduction to Machine Learning
- MIT Theoretical Computer Science courses (Computability and Complexity Theory)

Additional:

- Technical Skills: Python, C++, SQL, Linux, Vim, Git, Docker, Office
- Interests include: soccer, fitness and mahjong
- Languages: Mandarin (native) and English (CET6 555, preparing for TOFEL)