

CHENNING (ANNETTE) HUANG

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EDUCATION

ShanghaiTech University

Sep 2021 - Present

Undergraduate; Computer Science; School of Information Science and Technology

- **GPA: 3.70/4.0** (Top 15%)
- **Relevant Coursework:** Introduction to Programming (A+), Discrete Mathematics (A+), Algorithms and Data Structures (A), Signal and System (A), Computer Architecture (A), Introduction to Probability (A-).

University of California, Berkeley

Aug 2023 - May 2024

Concurrently Enrolled Undergraduate; Department of Electrical Engineering and Computer Sciences

- **GPA: 4.0/4.0**
- **Relevant Coursework:** Introduction to Artificial Intelligence (A+), Efficient Algorithms and Intractable Problems (A+), Computer Security (A), Optimization Models in Engineering (A), Introduction to Machine Learning (A)

RESEARCH EXPERIENCE

Lawrence Berkeley National Laboratory

Feb 2024 - Present

Topic: Machine learning research for high energy physics using natural language processing techniques

- **Visualization of particle events:** Prepared a notebook that reads in the parquet file converted from ACTS raw CSV files and visualize various information.
- **Transformer model building and training:** Built a deep learning model to classify if a reconstructed track is true. This model comes from fine-tuning the Bert Model for Sequence Classification, and reached a accuracy of 98.5% in one epoch with our smallest training dataset (100 events).

ShanghaiTech University; AS3R-Lab

Jun 2023 - Nov 2023

Topic: Type inference with LLM

- **Test and optimization of LLM's performance in type inference:** Summarized recent papers on the performance of LLM in software engineering. Tested the ability of the LLM to perform type inference. Designed better prompts for ChatGPT, so that they can perform type inference with better performance. Tested the usability of a python script to automatically extract type inference results. Also compared its results with the results generated by ChatGPT.

PROJECT EXPERIENCE

A Secure File Sharing System

UC Berkeley CS 161 Project

- **Design and implementation of file sharing system:** Designed and implemented a secure file sharing system which allows users to log in, store files, and share files with other users, while in the presence of attackers. The system is implemented in Go. Main concepts involved includes: Symmetric-Key Encryption, HMAC, Public-Key Encryption, Digital Signatures.

A Study in AGD and Linear Coupling *UC Berkeley EECS 127 Project*

- **Study and implementation of papers related with AGD:** Read two research papers on AGD: Nesterov's original accelerated gradient descent, and a follow-up that use linear-coupling to achieve the same convergence rate. Deeply went through the proof of both methods, and used python to visualize their performance in comparison with many other optimization algorithms. Also explored an alternative to AGD that comes from a geometric perspective and obtains equivalent convergence rate.

WORKING EXPERIENCE

Teaching Assistant; Introduction to Programming

Feb 2023 - Jun 2023

School of Information Science and Technology; ShanghaiTech University

- Took charge of the recitation class. Gave tutorial to over 40 students with total instruction time about 20 hours. The content includes basic use of C and C++, coding conventions copy control STL. Also holds office hours and give students help on the homework. Designed and tested homework problems, and answered questions on Piazza.

Teaching Assistant; Introduction to Information Science and Technology

Jul 2023 - Sep 2023

School of Information Science and Technology; ShanghaiTech University

- Hold office hours and gave tutorial to over 50 students with total instruction time about 10 hours. Content includes basic use of Python and how to start program. Also, answered questions on Piazza.

AWARDS

- Outstanding Undergraduate Award (**Top 8%**) Dec 2023
- First Prize, National English Competition for College Students 2022 (**Top 1** of the whole university) Sep 2022
- Second Prize, Mathematical Contest in Modeling for College Students 2022 Nov 2022

MISCELLANEOUS

- **Skills:** C, C++, Python, Matlab, Java, Go
- **Languages:** Mandarin (native language), English (can be used as working language, TOEFL 111: 30/29/24/28)