

TIANYI LI

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EDUCATION

- Carnegie Mellon University**, Pittsburgh, PA Expected: May 2024
Master of Science, Mobile and IoT Engineering (**Concentration: Machine Learning**) **GPA: 4.00/4.00**
- **Coursework:** Computer Systems, Storage Systems, Deep Learning Systems
- University of Michigan**, Ann Arbor, MI Jul. 2022
Bachelor of Science Engineering, Computer Science | Minor in Mathematics **GPA: 3.95/4.00**
- **Coursework:** Data Structures & Algorithms, Machine Learning, Operating Systems, Database Management, Web Systems, Parallel Programming, Computer Vision, Computer Architecture
- Shanghai Jiao Tong University**, Shanghai, China Jul. 2022
Bachelor of Science Engineering, Electrical and Computer Engineering **GPA: 3.63/4.00**

SKILLS

Programming Languages: (*Proficient*) C, C++, Python; (*Familiar*) HTML, JavaScript, MATLAB, SQL; (*Basic*) Java, R
Framework and Tools: Linux, Shell, Git, PyTorch, LaTeX, Unity, CUDA, Hadoop

SELECTED PROJECTS

- Operating System Implementation, Team Leader** Jan. 2022 - Apr. 2022
- Implemented threads, mutex, and semaphores on multiprocessor systems using **C++**.
 - Developed a **Pager System** to manage virtual memory in a POSIX simulated infrastructure.
 - Created a hierarchical **Network File Server** handling concurrency, user security, and malicious attacks.
- Web System Design, Team Leader** Jan. 2021 - Apr. 2021
- Designed an **Instagram clone**, consisting of a frontend client-dynamic page interface with **JavaScript**, **HTML**, and **CSS**, along with a backend database and privacy management system via **Flask** and **SQLite**.
 - Established a **Search Engine** based on **TF-IDF** with web data processed by a self-designed **MapReduce**.
 - Applied **IaaS** and **PaaS** to scale the web applications.
- AI Master of Othello, Side Project** Dec. 2020 - Jan. 2021
- Constructed a combinatorial model of **MCTS** and **ResNet** to master the board game Othello using **Reinforcement Learning** and **Deep Learning** from scratch, inspired by *DeepMind's AlphaGo Zero*.
 - Beat my 12-year-old cousin with the final model under limited training resources.

WORKING EXPERIENCE

- Michigan Institute for Data Science, Teaching Assistant** Jun. 2022 - Jul. 2022
- Introduced students to Data Science via **Python** on Clustering, KNN, Visualization, and Networks.
- Shanghai Jiao Tong University, Intern** May 2021 - Aug. 2021
- Accomplished a De Bruijn decoder utilizing **Computer Vision** for orientation of 1mm resolution.
 - Engineered a **VR Simulator** with a six DOF coordinate resolver within millisecond response.
- Shanghai Jiao Tong University, Vice Minister of Alliance Department** Jun. 2019 - May 2020
- Organized events and investigations to speak up for students and minorities.

RESEARCH EXPERIENCE

- Data-driven Predictive Methods for Global Consensus, Research Assistant** Jan. 2021 - Present
- Maintained an automatic scheme of a **NoSQL** Database of global demographics on *Orion* platforms.
 - Systematized a **multithreaded web proxy** for *Wikipedia's* coordination, achieving a **5x acceleration**.
- Detecting Problem Statements in Peer Assessments, Research Intern** Jan. 2020 - Feb. 2020
- Established a **BERT**-based encoder for peer assessment analysis, reaching an accuracy of **93.1%**.
 - Published a paper on EDM 2020 as the second author.