

Huan Xu

+1(608) 698-7552 | huan.xu71@gmail.com | [GitHub](#) | [LinkedIn](#)

EDUCATION

University of Wisconsin-Madison

Sep 2019 – May 2023

B.S. in Computer Sciences, Mathematics, and Statistics (triple major)

Overall GPA: 3.88/4.0

- **Courses:** Compilers, Algorithms, Operating Systems, Computer Networks, Database Management Systems, Artificial Intelligence, Linear Optimization, Probability Theory, Combinatorics, Linear Algebra, Calculus, etc.
- **Teaching Experience:** Teaching Assistant for Introduction to Computer Graphics (over 200 students).

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python3, C/C++, Java, Groovy, Bash, Batch, R

Softwares and Frameworks: React, Vue, Express.js, FastAPI, Flask, Redis, PostgreSQL, MongoDB, Docker, Apache2, Jenkins, Prometheus, Grafana

WORK EXPERIENCE

GPU Software Development Engineer Intern

May 2022 - Aug 2022

Intel Corporation, Accelerated Computing Systems and Graphics

Seattle, WA

- Settled security risks for an internal workload management tool by connecting the **Azure Active Directory** with the internal Intel IdP using the **OAuth2 Protocol**.
- Built the user role infrastructure for an internal workload management SPA by implementing SSO authentication, microservice authentication, and API key authentication using **React, Node, Express, and MongoDB**.
- Pulled CI maintainers out of the firefighting mode by delivering a CI Health Monitoring Dashboard to track over 200 health matrices for 32 build servers with **Docker, Prometheus, and Grafana**.
- Reduced the CI recovery window from hours to seconds and automated 90% of toil by building a CI Health Automation System of **Groovy pipelines** and **Python daemons**.

Data Engineer Intern

Jun 2021 - Aug 2021

Teradata Corporation

Remote

- Built an **ETL** routine for a world-top commercial bank for credit card fraud prevention and detection.
- Extracted credit card data from the data warehouse for fraud detection using **TSQL, Perl** and **Bash** scripts.
- Led an emergent and complex data extraction task requiring joining more than 20 tables across 2 databases. Wrote peer-reviewed SQL and communicated with the operation team to ship the data in time.

RESEARCH EXPERIENCE

Research Assistant: Computer Vision and Edge Computing

Jan 2022 - Present

Advisor: Dr. Yu Hen Hu

Madison, WI

- Proposed and developed a purely vision-based 3D whole-body motion capture system with **TensorRT**.
- Trimmed neural network for resource-constraint hardware by weight quantization and **CNN channel pruning**.

Research Assistant: Computer Vision and Synthetic Pretraining

Jan 2021 - Present

Advisor: Dr. Yin Li

Madison, WI

- Helped **3D Human Pose Estimation** to overcome domain gaps for better real-world performance.
- Built a data synthesis pipeline with **OpenGL** to generate 2D input and 3D groundtruth as the pretrain dataset.
- Showed the generalizability of synthetic pertaining by improving the downstream skeleton-based action recognition accuracy from 81% to 84%.

Research Assistant: Computer Vision and Ergonomics Applications

Sep 2020 - Jan 2021

Advisor: Dr. Yin Li

Madison, WI

- Developed a vision-based pose estimation system to evaluate the ergonomics risk for blue-collar workers.
- Verified results by setting up and running 6 human pose estimation methods with **Docker** and **Anaconda**.
- **Served as the 3rd author** for *A Single-Camera Method for Estimating Lift Asymmetry Angles using Deep Learning Computer Vision Algorithms* in **The Journal of the Human Factors and Ergonomics Society**.