

# JUNDA SHEN

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## EDUCATION

**University of Illinois at Urbana-Champaign**  
Master of Computer Science, GPA: **4.0/4.0**

*Illinois, United States*

**ShanghaiTech University**  
Bachelor of Engineering in Computer Science and Technology

*Shanghai, China*

## TECHNICAL SKILLS

**Programming Languages** C/C++, Python, Java, JavaScript, PHP, Groovy, MATLAB, RISC-V  
**Tools & Frameworks** CUDA, MySQL, MongoDB, Node.js, React, Docker, K8s, Elasticsearch, Nginx, Jenkins

## INTERNSHIP EXPERIENCE

**Tesla** *California, United States*  
*Software Engineer Intern* *Aug. 2023 – Dec. 2023*

- Engineered a performance analysis pipeline using **Python**, **SPL**, and **Groovy**, integrating diverse data sources
- Decreased data collection time from 3 hours to 15 minutes, providing a **70% increase** in the efficiency of analyzing video feeds, telemetry, and alert logs
- Developed testing framework and automation tools on **Linux** to evaluate **CYBERTRUCK**'s camera performance, detecting video latency and corruption rates **30% faster** than regular QA processes
- Completely owned the design and implementation of a **full-stack** application developed by **Django**, **React**, and **MongoDB** to significantly decrease communication overhead. Efficiently filtered out false critical alerts and **cut down** engineer standby time by **80%**

**SAP** *Shanghai, China*  
*Application Engineer Intern* *June 2021 – Mar. 2022*

- Primarily worked **cross-functionally** with SAP's customer success team, developing applications to streamline workflow across the company's international teams
- Developed a scalable test runner using **Selenium** with **Python** and deployed **Docker** images on a **Kubernetes** cluster, achieving a **50% reduction** in testing time
- Implemented real-time notification integrations with **Node.js** to unify communications across four separate platforms, resulting in a **40% decrease** in ticket response time across SAP's international offices
- Created chatbot with **React** to automatically answer recurring questions for SAP's international IT departments, searching internal documentation with **Elasticsearch** to surface answers quickly

## SELECTED PROJECTS

### Massively Parallel Computing (UIUC Masters Program)

- Optimized a convolution algorithm using **C++** and **CUDA** to massively accelerate computation for **deep learning** applications, specializing in image and audio recognition
- Achieved a **25,000x** speed improvement over CPU implementation and a **4x** higher throughput compared to basic GPU implementation, **ranking 5th** out of 150 peers
- Implemented data compression by transforming FP32 to **FP16**, achieving efficient and coalesced memory access with **constant memory** and **shared memory**
- Unrolled inputs into large matrices, implementing high-performance **tiled GEMM** using **Tensor** operations

### Online Order Platform (UIUC Masters Program)

- Crafted the frontend of a restaurant application for menu display and order intake using **React**, integrating **Ant Design** for intuitive, user-centric webpages
- Architected backend systems using **Express** and established robust connections with a **MySQL** database
- Deployed the **full-stack** application on Google Cloud Platform for public access

### Athenet (ShanghaiTech)

- Led** a team of 3 students to create a communication network using 3.5mm **audio cables** to enable data transfer between multiple laptops, optimizing for speed via **multithreading**
- Tailored a NAT with **socket programming**, connecting Athenet devices to the internet
- Elevated Athenet node functionalities by introducing an **FTP** service with 7 key control commands
- Placed in **Top 10** out of 60 competing teams for highest file transfer speed

## RELEVANT ACTIVITIES

**Teaching Assistant** | Introduction to Computer Science II (C++) *Spring 2023*  
| Numerical Optimization *Fall 2021*  
| Principles of Economics *Fall 2020*