# JUNDA SHEN

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## EDUCATION

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

**ShanghaiTech University** *Shanghai, China*
Bachelor of Engineering in Computer Science and Technology

## 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 50%

**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

**Athernet (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 Athernet devices to the internet
- Elevated Athernet 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++)
| Numerical Optimization
| Principles of Economics