

FEIYU ZHANG

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EDUCATION

University of Illinois at Urbana-Champaign, Champaign, IL Master of Science in Electrical and Computer Engineering	Aug 2021 - May 2024
University of Illinois at Urbana-Champaign, Champaign, IL Bachelor of Science in Computer Engineering	Sept 2017 - May 2021 GPA : 3.85
Zhejiang University, Hangzhou, China Bachelor of Engineering in Electronics and Computer Engineering	Sept 2017 - June 2021 GPA : 3.92

SKILL SETS

Courses	Data Structures and Algorithms, Operating System, Network, Database, Distributed Systems, Machine Learning, Parallel Programming, Blockchains
Programming	Python, C++, Golang, Rust , x86, C#, HTML&CSS, JavaScript
Framework & Tools	Linux, Cuda, Pytorch, Docker&K8s , Unity3D, Flask, Git, CI/CD, GCP

WORK EXPERIENCES

Applied Research Engineer Intern	Nvidia , Remote, USA, May. 2022 - Aug. 2022
<ul style="list-style-type: none">Integrated voice-based dialogue system backed by LLM,NLP and ASR working with Nvidia Nemo.Implemented asynchronous protocol in Omniverse to translate human language to actions in 3D and XR.Re-engineered SDK in Python for multi-slots, used by teams such as <i>Deepsearch</i> and marketing.	
Software Engineer Intern	Cloudflare , Remote, USA, Jun. 2023 - Aug. 2023
<ul style="list-style-type: none">Prototyped partial Colo Disablement service in Rust and Golang, which reduced possible incidents amount due to network overload by 30%, and helped the infrastructure to be robust, scalable.Tested core data model supporting RESTful APIs and Postgresql addressing backward compatibility.Developed codebases using Docker and CI/CD, and monitored data analytics with Grafana.	
Graduate Researcher	UIUC , IL, April 2022 - Present
<ul style="list-style-type: none">Led code switching speech recognition research based on <i>ESPnet</i>.Researched deep learning models including RNN-T, Bert and Transformer.Developed <i>Stable Diffusion</i> based Speech to Image Generation with <i>Wav2Vec</i> in Pytorch.	

ACADEMIC PROJECTS

Backend Project: Distributed System - Github	UIUC , IL, Jan. 2022 - May. 2022
<ul style="list-style-type: none">Implemented a Leader Election and Log Consensus system based on the <i>Raft</i> paper using Golang.Developed a distributed transactions system ensuring ACID property on distributed objects.	
Full Stack Project: Music Database and Website - Github	UIUC , IL, Aug. 2021 - Dec. 2021
<ul style="list-style-type: none">Initiated website that helps clients to discover 10,000+ music from 5+ music platforms.Designed a music database on GCP in MySQL with advanced query search and index.Developed a website's backend and frontend using HTML/CSS, Flask,JavaScript.	
GPU Project: CUDA for LeNet-5 - Github	UIUC , IL, Sept. 2020 - Dec. 2020
<ul style="list-style-type: none">Optimized GPU Convolution with CUDA kernel tricks including shared memory, unroll loop that reduced GPUTime by 97% comparing with no optimization baseline.Analyzed GPU performance on both system(<i>Nsight-Systems</i>) and kernel(<i>Nsight-Compute</i>) levels.	
Computer Network Project: TCP protocol - Github	UIUC , IL, Aug. 2020 - Dec. 2020
<ul style="list-style-type: none">Developed a TCP protocol based on UDP sendto() and recvfrom() using C with speed up to 40MB/s.Implemented reliable transmission, fast recovery and congestion control.	
Operating System Project: Unix-like OS	UIUC , IL, Nov. 2019 - Dec. 2019
<ul style="list-style-type: none">Delivered a Unix like OS kernel from scratch in C and x86, with features including interrupts, multiple terminals, paging, virtual memory, file systems, user/kernel mode, VGA drivers.	

TEACHING ASSISTANT

University of Illinois at Urbana-Champaign, Champaign, IL Senior Design FA21, Artificial Intelligence SP22&SP23, Computer Network FA22.	Aug 2021 - May 2023
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