

# ZHONGWEI XIE

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## EDUCATION

Wuhan University, Wuhan, CN

Aug,2021 – Jul,2025

B.Eng. in Computer Science and Technology, GPA: 3.82/4

## EXPERIENCE

WHU IC LAB

Wuhan, CN

Research Assistant

Aug,2023 – Dec,2023

- Proposed a high-performance parallel storage system oriented on NVM
- Preparing a paper as the secondary author

NTU Business AI Lab

Singapore(Remote)

Research Intern

Jan,2022 – Feb,2022

- Got knowledge about the architecture of Transformer and PyTorch
- Gained an understanding of the structure of modern neural networks

## SELECTED PROJECTS

ASC24

Nov,2023 – Feb,2024

- Collaborated on a proposal for a HPC systems which won the second class prize
- Studied HPC knowledge like hardware architecture and benchmark testing, power consumption and system monitoring, network and storage system, and some optimization strategies for HPC
- *Optimization for LLM inference*: begin with the baseline code and build a tailored, high-performance inference engine, considering the architectural characteristics of the HPC cluster.

A Linux-capable MIPS Processor

[code]

- Implemented a fully-functional MIPS processor with parameterized caches in 7000 lines of Verilog.
- Constructed an SoC on FPGA and ported the Linux kernel
- Gained extensive experience in debugging FPGA designs, Linux Kernel and U-Boot the bootloader.
- Fixed an ethernet driver bug in U-Boot and sent a patch

Introduction to the Linux Kernel

PDF [in Chinese]

- Wrote a 52-page case study on the Linux kernel.
- Researched the design of the Linux kernel by reading its source code and documentation.
- Analyzed the design and implementation of process management, memory management, file system, etc of the Linux kernel.

Control and intelligent perception for pepper

Feb,2023 – Jul,2023

- this project ultimately won the **1st place, RoboCup China Open 2023 @Home**
- Integrated pathfinding algorithms in Naoqi environment from ROS libraries
- Porting gmapping for 3D mapping, amcl for localization, move\_base for path planning to onboard environments.

Control and intelligent perception for quadcopter drones

Dec,2022 – Jun,2023

- this project ultimately won the **National First Prize, CRAIC 2023**
- Designed intelligent perception and control algorithms for UAV
- Implemented the communication code between sensors, onboard computers and flight control system.
- Completing image acquisition and analysis of t265 depth camera under the OpenCV framework

## SELECTED AWARDS

- Lei Jun Scholarship for Computer Science (One of the most prestigious scholarships in WHU) 2023
- Merit Student \*2 2022/2023
- 1st place, RoboCup China Open 2023 @Home [official website] 2023
- National First Prize, CRAIC 2023[official website] 2023

# SKILLS

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**Programming Languages:** C/C++, Python, Shell, Verilog, HTML/CSS, Bash (ranked by proficiency)  
**Tools and Frameworks:** Cmake, Gdb, Git, L<sup>A</sup>T<sub>E</sub>X, PyTorch, Docker, Openmpi, Vllm, Deepspeed, Megatron, Colossal-AI, C++ Concurrent Programming



武汉大学学生成绩单

Wuhan University Student's Transcript



姓名: 谢中伟

学号: 2021302111381

学院: 计算机学院

专业: 计算机科学与技术

学制: 4 年

Name: Xie Zhongwei      Number: 2021302111381      College: School of Computer Science      Specialty: Computer Science and Technology      Schooling Length: Four years

学年学期 School Year	课程名称 Course	课类 Course Sort	学分 Credit	成绩 Grade	成绩类 型 Note	学年学期 School Year	课程名称 Course	课类 Course Sort	学分 Credit	成绩 Grade	成绩类 型 Note
2021-2022 1st Term	人文社科经典导引 A Guide to Humanities and Social Sciences	R	2	89		2022-2023 2nd Term	军事高新技术及其应用 Military High Technology and Its Application	F	2.0	94	
	军事理论与训练 Military Theory	R	2	95			形势与政策4 Situation and Policy (4)	R	0.5	85	
	创业与法律 Entrepreneur and Law	F	2	W			操作系统 Operating Systems	R	2.5	89	
	形势与政策1 Situation and Policy (1)	R	0.5	90			数据库系统 Database Systems	R	2.5	91	
	思想道德与法治 Ideological Morality and Rule of Law	R	3	85			机器学习与模式识别 Machine Learning and Pattern Recognition	C	3.0	87	
	物联网导论 Introduction to the Internet of Things	C	1	90			科技写作 Scientific Writing	C	1.0	92	
	电路与电子学基础 Basis of Circuits and Electronics	C	3	93			移动编程技术 Mobile Programming	C	2.0	95	
	素质体育1 Physical Sports1	R	1	95			经济与人文地理 Economic and Human Geography	C	2.5	85	
	计算机科学导论 Introduction to Computer Science	R	1.5	92			美国社会与文化 An Introduction to American Society and Culture	R	1.5	90	
	认知过程的信息处理 Information Processing of Cognitive Processes	C	1	94			计算机组成与设计课程设计 Course Project for Computer Organization and Design	R	1.0	88	
	软件技术基础 Software Technology Fundamentals	C	3	90			计算机网络 Computer Networks	R	3.0	86	
	高等数学B1 Advanced Mathematics B1	R	5	89			软件构造基础 Basis of Software Construction	C	3.0	93	
	高级英语1 Advanced English (1)	R	1.5	83			初级项目实践 Primary Project Practice	C	1.0	90	
							操作系统课程设计 Operating System Design(T)	R	1.0	89	
2021-2022 2nd Term	中国近现代史纲要 Outline of Modern Chinese History	R	3.0	84		2022-2023 3rd Term	计算机网络课程设计 Course Project for Computer Network (T)	R	1.0	90	
	大学物理D1 College Physics D1	R	4	95							
	形势与政策2 Situation and Policy (2)	R	0.5	88							
	数字逻辑与数字电路 Digital Logic and Digital Circuits	R	3.0	92		2023-2024 1st Term	Linux原理与应用 Linux Principle and Application	C	2.0	92	
	离散数学 Discrete Mathematics	R	3.0	83			嵌入式系统 Embedded System	R	2.5	81	
	素质体育2 Physical Sports2	R	1	90			算法设计与分析 The Design and Analysis of Algorithms	R	2.5	89	
	线性代数B Linear Algebra B	R	3.0	90			编译原理 Principles of Compiler	R	3.0	86	
	自然科学经典导引 A Guide to Natural Sciences	R	2.0	85			足球1 Football1	R	1.0	99	
	计算机系统基础1 Fundamentals of Computer Systems	C	3.0	86		以下空白/The End					
	马克思主义基本原理 Basic Principles of Marxism	R	3.0	90							
	高等数学B2 Advanced Mathematics B2	R	5	94							
	高级英语2 Advanced English 2	R	1.5	88							
	高级语言程序设计 Advanced Programming Language	R	3.0	90							
2021-2022 3rd Term	专业认识实习 Cognition Practice of Major	C	1.0	96							
	数字逻辑与数字电路设计 Digital Logic and Circuit Design(T)	R	1.0	92							
2022-2023 1st Term	人工智能引论 Introduction to Artificial Intelligence	R	2.5	87							
	体育舞蹈 Sports Dance	F	2.0	95							
	健美操1 Aerobics1	R	1.0	95							
	形势与政策3 Situation and Policy(3)	R	0.5	91							
	数据结构 Data Structure	R	3.0	90							
	材料科学进展 Development of Material Science	C	2.0	90							
	概率论与数理统计B Probability and Mathematical Statistics B	R	3	91							
	毛泽东思想和中国特色社会主义理论体系概论 Introduction to Maoism and Theoretical System of Socialism with Chinese Characteristics	R	3.0	92							
	流行音乐的历史、风格与审美 Popular Music:the History,Styles,and Aesthetics	F	2.0	97							
	英国社会与文化 An Introduction to British Society and Culture	R	1.5	88							
	计算机组成与设计 Computer Organization and Design	R	3.0	80							
	识读美国 Reading America	F	2.0	87							
2022-2023 2nd	习近平新时代中国特色社会主义思想概论 An Introduction to Xi Jinping's Thought on Socialism with Chinese Characteristics in the New Age	R	3.0	93							

课程类别 Course sort: (R) 必修课 Required Course; (C) 限制选修课 Controlled Elective Course; (F) 任选课 Free Elective Course; (SE) 重考 Supplementary Exam; (RT) 重修 Retake.


备注: 课程名称带‘\*’的是课程替代课程; 成绩标记W(Withdrawal)的为中期退课课程。

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日期/Date:2024-02-09

武汉大学  
Wuhan University

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