方楠（2022硕士）

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🎂 24岁　⚥ 男

基础技能

- **编程技能：** C/C++、深度学习算法、图优化算法、前端开发、嵌入式开发、Python、Linux
- **语言技能：** 普通话（母语）、英语（CET-6）
- **能力特长：** 软件研发、算法研究、项目协作、项目管理、文档书写

职业经历

Synopsys 新思 - 实习生 研发部　　　　　　　　　　　　　　　　2021年07月 - 2021年09月

在研发部优化算法组(Opt, R&D)从事EDA软件中后端布局布线优化算法的研究，工程软件的代码调试，静态时序分析，以及调试工具的研究。

Worked at Synopsys in the Route Opt Team as R&D summer intern of Digital Design Group, mainly responsible for IC Compiler™ II & Fusion Compiler™.

What I did in my three weeks internship are:

1. Week 1~8: EDA Development Training, supporting teammates do some job tracker works (error reproduction, debugging, error analysis for three customer bug STAR and do two internal product enhancement).
2. Week 9~10: Investigate company's new debug tool and writing the usage report for company.
3. Week 11: Write the Modern C++ Style Guideline.
4. Week 12~14: Investigate how to bring POCV in the Opt driver sizing mechanism.

技能：C++、STL库、数据结构、静态时序分析、代码调试、EDA、POCV、Route、Opt

教育经历

杭州电子科技大学（硕士） - 计算机科学与技术 计算机学院　　　　　2019年09月 - 2022年06月

- 课程（CS）：应用数学、计算理论、数字图像处理、数字几何仿真、大数据可视化与可视分析、自然语言处理。
- 研究：深度学习、机器学习、网络结构搜索、对比学习、图像翻译、计算机视觉
- 成绩（11/191）："校研究生奖学金"一等奖、"校研究生奖学金"二等奖
- 基金："国家自然科学基金面上项目" * 3、"国家级大学生创新创业训练计划项目"、"浙江省教育厅一般科研项目"、"校研究生科研创新基金" * 2、"校大学生创新创业训练计划项目"
- 专利："一种基于自监督学习的非配对人脸图像翻译方法"
- 经历："智能可视化建模与仿真实验室"，"媒体智能实验室"，"复杂系统建模与仿真教育部重点实验室"

杭州电子科技大学（本科） - 计算机科学与技术 计算机学院　　　　　2015年09月 - 2019年06月

- 课程（EE）：C、电路分析、数字逻辑电路、模拟电子电路、信号与系统、电磁场与电磁波、高等数学、复变函数、概率论与数理统计、高等物理。
- 课程（CS）：C++、Java、离散数学、数据结构、算法分析与设计、计算机组成原理、操作系统、计算机网络、计算方法、数据库原理、编译原理、软件工程、计算机图形学、人工智能、数据挖掘、云计算。
- 成绩（37/354）："校学业奖学金"一等奖、"校学业奖学金"二等奖、"校学业奖学金"三等奖 * 5
- 基金："国家级大学生创新创业训练计划项目"、"浙江省新苗人才计划项目"、"校芯苗人才计划项目" * 4

- 专利："基于用户行为分析的智能家居节能系统"、"电器识别可视化系统"、"基于语音识别的智能老人看护系统"、"基于无线自组网协议的家电控制系统"
- 经历："Microchip微芯-杭电大学生科技创新孵化器实验室"

授课经历

中科寒武纪"智能计算系统" - 助教 计算机学院   2020年04月 - 2020年09月

讲授在寒武纪人工智能芯片上部署 TensorFlow AI 框架和 Pytorch AI 框架，并构建常用的人工智能视觉模型（图像翻译、人脸识别、人体姿态检测），以及片上人工智能模型的模型压缩和加速算法。

"智能自动驾驶" - 助教 计算机学院   2018年03月 - 2018年09月

讲授基础的AI自动驾驶算法（车道线检测、交通信号灯识别、交通标志识别、车辆识别和车辆跟踪、端到端强化学习自动驾驶系统），并利用STM32单片机和NVIDIA Jetson AI计算平台搭建简易自动驾驶小车。

Microchip微芯"PLC单片机程序设计" - 助教 电子信息学院   2016年06月 - 2016年09月

讲授利用微芯PLC单片机设计和制作PCB印刷电路板，并通过C语言编程实现"简易多进制计算器"、"光立方"、"二轮自平衡小车"、"四轴多旋翼无人机"。

项目经历

Linux操作系统内核研发 - 团队负责人   2017年10月 - 2018年02月

内容：Linux源码编译、内核进程访问和调用、Linux终端设计、Linux同步机制设计、Linux文件系统设计。

详情：开源代码

技能：C++、STL、Linux

智能制造AI机器人（浙江省教育厅一般科研项目） - 北京大学信息技术高等研究院合作项目   2020年03月 - 2020年09月

内容：AI图像艺术翻译算法、AI辅助艺术设计软件的开发与机器人控制系统、移动端控制软件的开发。

详情：演示视频

技能：C++、嵌入式开发、PCB设计、自动化控制算法、深度学习算法、路径规划算法、移动端软件开发

基于语音识别的智能老人看护系统（浙江省新苗人才计划项目） - 团队负责人   2017年06月 - 2019年06月

内容：嵌入式运动健康检测系统的研发、智能家居控制系统的研发、语音交互系统的研发和AI自然语言识别系统的研发。

详情：演示视频

技能：C++、嵌入式开发、PCB设计、自动化控制算法、数据库开发、数据可视化软件开发

基于用户行为分析的智能家居节能系统（国家级大学生创新创业项目） - 团队负责人   2017年05月 - 2018年12月

内容：智能家居控制系统的研发、电气检测系统的研发、AI电气行为分析算法的研发、自学习用户行为推荐系统的研发。

详情：演示视频

技能：C++、嵌入式开发、PCB设计、数据库开发、数据可视化软件开发、深度学习算法、推荐系统算法

个人总结

- 计算机和电子信息多学科的学习经历
- 人工智能算法和嵌入式软硬件、网页端移动端软件的研发经历
- 授课讲学和项目研发的组织管理经历

Nan Fang (Master of 2022)

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💻 24   ⚥ Male

BASIC SKILLS

- **Programming Skills:** C/C++, Embedded Development, Python, Deep Learning, Linux, Front-end Web Development

- **Languages:** Mandarin (Native), English (CET-6)

- **Software Skills:** Vim, VSCode, Clion, Keil, Altium Designer, Quartus

- **Ability:** Software Development, Algorithm Research, Project Collaboration, Project Management, Document Writing

PROFESSIONAL EXPERIENCE

Synopsys - Intern R&D   2021.07 - 2021.09

Worked at Synopsys in the Route Opt Team as R&D summer intern of Digital Design Group, mainly responsible for IC Compiler™ II & Fusion Compiler™.

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Skills: C++, STL, Data Structure, EDA, STA, POCV, Route, Opt, Debug

EDUCATION BACKGROUND

Hangzhou Dianzi University (Master) - Computer Science and Technology, School of Computer Science   2019.09 - 2022.06

- Courses (CS): Applied Mathematics, Computation Theroy, Computer Graphics, Digital Image Processing, Geometric Computing, Data visualization, Natural Language Processing, Computer Network, Information Security.

- Research: Deep Learning, Machine Learning, Neural Architecture Search, Image Translation, Computer Vision.

- Grades (11/191): First class scholarship * 1, Second class scholarship * 1.

- Fund Projects: "National Natural Science Foundation of China" * 3, "National Undergraduate Innovation And Entrepreneurship Training Program" * 1, "General Research Project of Zhejiang Provincial Department of Education" * 1, "Graduate Research and Innovation Fund" * 2.

- Patents: "A method for unpaired face image translation based on self-supervised learning".

Hangzhou Dianzi University (Bachelor) - Computer Science and Technology, School of Computer Science   2015.09 - 2019.06

- Courses (EE): Circuit Analysis, Digital Circuit, Analog Circuit, Signals And Systems, Field and Wave Electromagnetics, Advanced Mathematics, Linear Algebra, Functions of Complex Variables, Probability and Statistics, Advanced Physics.

- Courses (CS): C++, Java, Discrete Mathematics, Data Structure, Algorithms, Computer Composition Principle and Architecture, Operating System, Compute Network, Computational Methods, Principles of Database, Compilation Principle, Software Engineering, Computer Graphics, Artificial Intelligence, Data Mining, Cloud Computing.

- Grades (37/354): First class scholarship * 1, Second class scholarship * 1, Third class scholarship * 5.

- Fund Projects: "National Undergraduate Innovation And Entrepreneurship Training Program" * 1, "Zhejiang Xinmiao Talents Program" * 1, "University Xinmiao Talents Program" * 4.

- Patentes: "Smart Home Energy Saving System Based on User Behavior Analysis", "Electrical Appliance Identification Visualization System", "Smart Elderly Care System Based on Voice Recognition", "Home Appliance Control System Based on

Wireless Ad Hoc Network Protocol".

TEACHING EXPERIENCE

Cambrian "Intelligent Computing System" - Teaching Assistant, School of Computer Science   2020.04 - 2020.09

Course Contents: Deploy TensorFlow AI framework and Pytorch AI framework on Cambrian AI chip; Build common AI vision models (Image Translation, Face Recognition, Human Posture Estimation); Model compression algorithm and acceleration algorithms for on-chip deployment.

Self-Driving Car - Teaching Assistant, School of Computer Science   2018.03 - 2018.09

Course Contents: Basic AI autopilot algorithms (lane line detection, traffic light recognition, traffic sign recognition, vehicle recognition and vehicle tracking, end-to-end reinforcement learning autopilot system); Self-Driving car construction by using STM32 MCU and NVIDA Jetson AI computing platform.

Microchip "PIC MCU Programming" - Teaching Assistant, School of Electronics   2016.06 - 2016.09

Course Contents: Produce and implement "Simple Multi-base Calculator", "Light Cube", "Two-wheel Self-balancing Car", "Quadrotor Aircraft" by using Microchip PIC MCU and C++ Language.

PROJECT EXPERIENCE

Linux Kernel Development - Project Leader   2017.10 - 2018.02

Contents: Linux source code compilation, kernel process access and call, Linux terminal design, Linux synchronization mechanism design, Linux file system design.

Details: [Open Source Code](#)

Skills: C++, STL, Linux.

Intelligent Manufacturing AI Robot - Cooperation Project With Advanced Institute of Information Technology, Peking University   2020.03 - 2020.09

Contents: R&D of AI Image Translation Algorithm, AI Auxiliary Art Design Software, Robot Control System and Mobile Software.

Details: [Demo Video](#)

Skills: C++, Embedded Development, PCB Design, Automation Control Algorithm, Deep Learning Algorithm, Path Planning Algorithm, Front-end Web Development.

Smart Elderly Care System Based on Voice Recognition - Project Leader   2017.06 - 2019.06

Contents: R&D of Intelligent Home Control System, Speech Interaction System and AI Natural Language Recognition System.

Details: [Demo Video](#)

Skills: C++, Embedded Development, PCB design, Automation Control Algorithm, Database, Data Visualization.

Smart Home Energy Saving System Based on User Behavior Analysis - Project Leader   2017.05 - 2018.12

Contents: R&D of Intelligent Home Control System, Electrical Detection System, AI Electrical Behavior Analysis Algorithm, User Behavior Recommendation System.

Details: [Demo Video](#)

Skills: C++, Embedded Development, PCB Design, Database, Data Visualization, Deep Learning Algorithm, Recommended System Algorithm.

ABOUT ME

- Multidisciplinary learning experience of EE and CS.
- R&D experience of AI Algorithm, Embedded hardware and software.
- Teaching experience, project organization and management experience.