HAODONG LU

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EDUCATION

Huazhong University of Science and Technology, Hubei, China

⋄ **B.S. in Computer Science**, expected July 2024   2020 - Present

⋄ **Cumulative GPA:** 3.85 / 4.00

EXPERIENCE

Research Assistant   Jun 2022 - Present

Distributed Systems Team, Key Laboratory of Service Computing and Systems Ministry of Education & Amp, Huazhong Uni. of Science & Tech.   *Wuhan, Hubei, China*

- Co-led the research of extending the sandwich arbitrage strategy and proposed a "Lasagne" strategy on Ethereum.
- Conducted several experiments to evaluate the strategy and optimized arbitrage speed (1.53x) and accuracy.
- Developed an arbitrage system for the "Lasagne" strategy using Node.js, TypeScript, Go, and solidity.
- Led a "XETH" project: An open-source platform for Ethereum data intelligence analysis and management.

Research Assistant   Jan 2022 - Feb 2022 & Jul 2022 - Present

PDSL Team, Parallel Data Storage Laboratory, Wuhan Photoelectric National Research Center   *Wuhan, Hubei, China*

- Participated in the Talent Plan of PingCAP company and completed the tinykv project.
- Realized offloading the compaction operation of LSM-tree to the DPU hardware accelerators based on RocksDB.
- Implement a simple RDMA-based RPC using C++ with Meson.
- Developed a lightweight client-server file system running separately on DPU and CPU using C++.

Research Assistant   Oct 2020 - Dec 2021

National Key Laboratory of Digital Manufacturing Equipment and Technology   *Wuhan, Hubei, China*

- Co-developed an adsorption mobile processing robot system for large-scale aircraft variable-curvature skin.
- Co-invented a perception-fused prosthetic hand, responsible for developing perceptual acquisition modules and perceptual feedback modules.
- Developed desktop and web applications tracking and displaying robots' real-time position using Qt, C++, etc.
- Optimized vision algorithms on the AprilTags visual fiducial system using C++.

AWARDS & SCHOLARSHIPS

⋄ **First Prize**: 17th "Challenge Cup" National College Student Curricular Academic Science & Technology Works Competition   Apr 2022

⋄ **Grand Prize**: 13th Hubei Province "Challenge Cup" College Student Curricular Academic Science & Technology Works Competition   May 2021

⋄ **Grand Prize**: 8th "Qiushi Cup" College Student Academic Science & Technology Works Competition   Apr 2021

⋄ **First Prize**: 17th "Mindray Cup" College Student Robot Competition   Apr 2021

⋄ School Merit Student Scholarship   Oct 2021

⋄ School Innovation Scholarship   Oct 2022

⋄ National Hisense Scholarship   May 2022

⋄ National Huawei's "Smart Base" Scholarship   May 2022

⋄ School Freshman Excellence Scholarship   Apr 2021

⋄ School Freshman Self-improvement Scholarship   Apr 2021

PUBLICATION

SOCIETY MEMBERSHIPS

Team Dian, Hubei, China

- **Leader of Web Group** Sep 2021 - Present
- Led a "KIDPOSE" web project and implemented the back-end module using Java with Springboot.
- Built the team wiki and the official website.

Team FOCUS, Hubei, China

- **Leader** Oct 2020 - Present
- Daily organization and management of the team.
- Led projects about amphibious robots and the web.
- Co-led the Preparation for the 17th "Challenge Cup" National Competition.

Team STAR, Hubei, China

- **Member** Sep 2021 - Present
- Researched databases and distributed key-value storage with PingCAP company.

Organization Department of the School Youth Committee, Hubei, China

- **Assistant of the Comprehensive Management Office** Oct 2020 - Oct 2021
- organized large-scale conferences and cultural and sports activities.
- coordinated the work of departments of the committee.
- Volunteer activities including Campus Health Maintenance and Hometown cleaning.
- Social practice activities including high-school presentations and the "Three Rural Areas" Social Practice, gaining the prize of **School Excellent Practice Individual** in July 2021.

PATENTS

Perception-fused prosthetic hand (co-inventor), CN Patent CN215192638U Issued Dec 17, 2021

- A fused perceptual prosthetic hand includes perceptual acquisition modules, perceptual feedback modules, and a prosthetic hand body, realizing moving and grabbing through electromyographic signals.

Grinding head for achieving self-adaptive flexible constant-force grinding function of grinding and polishing unit (co-inventor), CN Patent CN214923415U Issued Nov 30, 2021

- An industrial-grade grinding head for high-quality and high-precision flexible and constant-pressure machining on large variable-curvature workpiece surfaces.

SKILLS & LANGUAGES

⬦ **Programming Languages:**	Java, C++, Golang, C, JavaScript, NodeJS, Solidity, Python, SQL, x86 Assembly
⬦ **Engineering Skills:**	Linux, MySQL, TiDB, Git
⬦ **Markup Languages:**	LATEX, Markdown
⬦ **Soft Skills:**	Self-motivated, Naturally Curious, Excellent Communication Skills, Can-do Attitude
⬦ **Languages:**	Chinese (native), English (fluent)