

ZHIYANG CHEN

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Education

M.S. in Computing Science at **Utrecht University**, Utrecht, the Netherlands
, Selected courses: , , , ,

Sep, 2025 – Present

B.E. in Computer Science and Technology at **Beijing Technology and Business University**, Beijing, China
, Selected courses: , , , ,

Sep, 2019 – Jun, 2023

Work Experience

BTBU, Beijing, China

Aug, 2024 – Aug, 2025

Project Leader, Research Assistant

Quan Cheng Laboratory, Jinan, China

Jan, 2024 – Feb, 2024

Secure Operating System Kernel Project, Flexible Researcher

Related Projects

Async Rust Debugger, GDB extension for debugging asynchronous Rust code

 [chenzhiy2001/async-rust-debugger](#)

- Developed a GDB extension in Python to trace and debug async Rust coroutines at runtime.
- Implemented whitelist-based function tracing with prefix matching support for flexible instrumentation.
- Visualized async call chains, poll events, and await points to help understand async state machine execution.

Tradebot, Automated trading bot for cryptocurrency markets

 [chenzhiy2001/tradebot](#)

- Built a Python-based automated trading system with configurable buy/sell strategies and rate thresholds.
- Implemented trade logging and monitoring capabilities for tracking trading decisions and performance.

Source-level OS Debugging Tools with Rust Language Support, VSCode Extension (role: project leader)

 [chenzhiy2001/code-debug](#)

- Supported source-level tracing and debugging across kernel state and user state based on QEMU and GDB.
- Supported performance analysis and monitoring across kernel and user states based on eBPF.
- Supported the combination of breakpoint debugging and performance monitoring based on VSCode to build remote development environments.

Skills

- Programming Languages: multilingual (not limited to any specific language), especially experienced in TypeScript/JavaScript Python Rust C C++ Java, comfortable with Wolfram Haskell Dart R MATLAB (in random order).
- IDE Tooling: **4 years of experience**, familiar with VSCode plugin development.
- Tools: editor-agnostic, have experience with team tools like YouTrack, Jira, GitHub, BitBucket, Slack, JetBrains Space and more.

Misc

- Languages: English - fluent (IELTS 7.5), Chinese - native speaker

Publications & Patents

- [1] Z. Chen, J. Wu, Y. Yang, Y. Zhang, and H. Wang, "Debugging Kernel and User Space Synchronously Based on GDB," in *2025 6th International Conference on Computer Engineering and Application (ICCEA)*, 2025, pp. 1–5. doi: [10.1109/ICCEA65460.2025.11103326](https://doi.org/10.1109/ICCEA65460.2025.11103326).
- [2] Z. Chen, Y. Yu, Z. Li, and J. Wu, "An Online Debugging Tool for Rust-based Operating Systems," in *Rust Education Workshop*, 2022.
- [3] J. Wu, L. Zhang, Z. Chen, and Y. Xiang, "Method and Apparatus for Debugging Operating System Source Code Across Kernel State and User State. C.N. Patent 2023115942620, Mar. 2024"
- [4] X. Zhao, Z. Chen, L. Zhang, T. Yu, and P. Chunyi, "A Portrait Ranging Method Based on K210 Internet of Things System. C.N. Patent 2023115942620, May. 2021"