

Reo Hakuta

Kyoto Institute of Technology, Undergraduate Program of Information Science, Year 4
Computer Vision Lab

I research vision-language models and develop full-stack applications in TypeScript. I work across Figma UI design, implementation, testing, CI and CD, with experience in team code reviews and open-source discussions in English.



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Education

Kyoto Institute of Technology (National University) Undergraduate Program of Information Science, School of Science and Technology, third-year transfer, expected graduation: March 2027, GPA 3.6/4.0	Apr 2025 - Mar 2027 Kyoto, Japan
National Institute of Technology (KOSEN), Ibaraki College Graduated from the Computer Science Course, Department of Industrial Engineering, GPA 3.67/4.0	Apr 2020 - Mar 2025 Ibaraki, Japan

Research Presentations

Building a Japanese Design Gazette Dataset and Designing Benchmarks for Cross-Modal Design Understanding [1], [2], [3] Aug 2026

21st Natural Language Processing Symposium for Young Researchers (YANS2026)

Japanese design gazettes record product appearances in text and multi-view drawings, but format differences hinder reuse. As first author, I structured ~690k gazettes and ~5.92M drawings and designed VQA tasks for naming, description, classification and viewpoint reasoning. Evaluating Japanese open-weight models such as LLM-jp and Sarashina across inputs revealed reliance on classification tables, multi-view limitations and inconsistent classification gains from added drawings.

Keywords: 🐍 Python, 🤖 Transformers, 🏎 vLLM, 🧩 XGrammar, 🦆 DuckDB, 🌀 SingularityCE

Professional Experience

PLAID, Inc. Summer Internship [4], [5] 16 Aug - 15 Sep 2025
Developer Experience & Performance Team

I configured CI to run only test suites affected by each pull request in a large TypeScript monorepo's AI workspace. I migrated CI jobs to Namespace runners, cutting test runtime from 74s to 32s (42s, about 57%). I upgraded React linting to ESLint v9, improved accessibility, built internal Hono ESLint plugins and centralized dependencies with pnpm catalogs. I trialed Trivy static analysis in AWS and Google Cloud test environments.

Keywords: 📘 TypeScript, ⚡ React, 🍷 Hono, ✅ Vitest, 🔍 ESLint, 🏠 Trivy, 🐙 GitHub Actions

YUMEMI (now Accenture Japan Ltd.) Summer Internship [6] Aug 2024
Frontend Engineer

I developed the frontend of an internal work management app. For the hiring assignment, I independently built a RESAS population-comparison app in six days (about 30 hours), from Figma design through implementation, testing, CI and documentation.

YUMEMI Passport coding assessment: SS rating (professional-level proficiency) Jun 2024

Keywords: 📘 TypeScript, ⚡ React, 🌐 Next.js, 🗡 Radix UI, 🛡 Zod, 🌿 OpenAPI, 📖 Storybook, ✅ Vitest, 🎭 Playwright, 🎨 Figma

Awards

OpenAI Codex Student Builder Fest 2026, participant (26 of 216 teams selected); received ChatGPT Pro 20x (US\$200) and merchandise worth JP¥ 8,000 (US\$51) [7] ¹	Sep 2026
21st Natural Language Processing Symposium for Young Researchers (YANS2026), Hackathon ICL Division Excellence Award [1], [8]	Aug 2026
6th National Institute of Technology Deep Learning Contest 2025 (DCON2025), 5th place, JP¥ 50M (US\$317.5k) valuation; Topy Industries Award, Hitachi Industry & Control Solutions Award, QUICK Award [9], [10], [11] ¹	May 2025
Kloud Hackathon #3, Design Award [12]	Aug 2023
Thailand-Japan Game Programming Hackathon 2022, Winner [13]	Dec 2022

¹USD equivalents are approximate: US\$1 = JP¥157.49 (BOJ, 18 Sep 2026, 17:00 JST midpoint).

Selected Projects

TableCast [7] Sep 2026

Full-Stack Development Lead, Team KOSEN

I built a multi-tenant SaaS platform for AI-assisted restaurant ordering and operations, with organization management, an OAuth-enabled remote MCP server, and a voice agent. I developed the PWA and APIs for membership, orders and store themes, and set up CI and CD.

Keywords:  TypeScript,  React,  TanStack (Start, Query, Form),  PWA,  Hono,  Better Auth,  Drizzle,  MCP Server,  GPT-Live-1,  React Email,  Cloudflare Workers,  Durable Objects,  D1,  R2

Locker.ai [9], [11] May 2025

Frontend, BFF and Chat Agent Development

I co-developed a lost-property system connecting registration, conversational search, identity verification and returns through smart lockers. I built the frontend, its backend for frontend (BFF), and a chat agent whose tool calls display UI components.

Keywords:  TypeScript,  React,  Next.js,  NestJS,  GraphQL,  Prisma,  Supabase,  Vercel AI SDK,  LangChain,  GPT-4o,  Figma

Shelffree [12] Aug 2023

Web Development and Device Integration

I co-developed an unattended library system using face recognition and RFID, and built the web interface for loan status and due dates.

Keywords:  TypeScript,  Python,  Next.js,  Clerk,  Prisma,  Raspberry Pi,  Figma

Qualifications & Languages

Japanese - Native

TOEFL iBT 86/120 (R25, L26, S13, W22) Nov 2025

TOEIC Listening & Reading Test 955 (L475, R480) [14] Jun 2025

International Experience

Victoria University [15], [16] Feb 2026

Completed VU English EAP5B, meeting undergraduate English requirements without a separate language test (IELTS 6.0 equivalent)  Melbourne, Australia

TAFE Queensland Sep 2024

Completed Advanced General English (ELICOS), CEFR C1  Brisbane, Australia

Chosun College of Science & Technology Sep 2023

Participated in a short-term exchange program in South Korea  Gwangju, Republic of Korea

Thailand-Japan Student ICT Fair 2022 (TJ-SIF 2022) [13] 20 - 23 Dec 2022

I attended TJ-SIF at Princess Chulabhorn Science High School Chiang Rai  Chiang Rai, Thailand

References

- [1] R. Hakuta, "YANS2026 Natural Language Processing Symposium: Building a Japanese Design Gazette Dataset and Cross-Modal Benchmarks." Accessed: Sep. 22, 2026. [Online]. Available: <https://reo.hakuta.org/en/works/yans2026-design-dataset>
- [2] Kyoto Institute of Technology, Computer Vision Laboratory, "Publications." Accessed: Sep. 22, 2026. [Online]. Available: <https://vision.is.kit.ac.jp/bib/ja.html>
- [3] YANS Organizing Committee, "YANS2026 Program." Accessed: Sep. 22, 2026. [Online]. Available: <https://yans.anlp.jp/entry/yans2026program>
- [4] R. Hakuta, "My PLAID Internship: Improving Developer Experience in a Large Monorepo." Accessed: Sep. 22, 2026. [Online]. Available: <https://reo.hakuta.org/en/blog/plaid-internship>
- [5] R. Hakuta, "My PLAID Internship: Improving Developer Experience in a Large Monorepo." Accessed: Sep. 22, 2026. [Online]. Available: <https://tech.plaid.co.jp/summer-intern-monorepo-dx>
- [6] R. Hakuta, "Regional Economy and Society Analyzing System (RESAS): Visualising Population Data by Prefecture." Accessed: Sep. 22, 2026. [Online]. Available: <https://reo.hakuta.org/en/works/resas>
- [7] R. Hakuta, "TableCast: A Tabletop AI Assistant for Choosing and Ordering Food — Guest Service and Restaurant Management with GPT-Live-1 and Agent Plugin." Accessed: Sep. 22, 2026. [Online]. Available: <https://reo.hakuta.org/en/works/openai-codex-student-builder-fest-2026>
- [8] YANS Organizing Committee, "YANS2026 Report." Accessed: Sep. 22, 2026. [Online]. Available: <https://yans.anlp.jp/entry/yans2026report>
- [9] R. Hakuta, "Locker.ai: Lost Property Management with an LLM and Smart Lockers." Accessed: Sep. 22, 2026. [Online]. Available: <https://reo.hakuta.org/en/works/locker-ai>
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- [12] R. Hakuta, "Shelfree: An Unattended Library System Using Face Recognition and RFID." Accessed: Sep. 22, 2026. [Online]. Available: <https://reo.hakuta.org/en/works/shelfree>
- [13] National Institute of Technology, Ibaraki College, "Student Team Wins the Thailand-Japan Game Programming Hackathon 2022." Accessed: Sep. 22, 2026. [Online]. Available: <https://www.ibaraki-ct.ac.jp/info/archives/59235>
- [14] IIBC, "TOEIC Listening & Reading Test — Digital Official Score Certificate." Accessed: Sep. 22, 2026. [Online]. Available: <https://iibc.cloudcerts.jp/viewer/cert/5aJemlWBgNAqgu68NgOA5VmlbVAVQ8JRnMv07Bgeaq17FmKBNmY50Ahgl0n2QWLb>
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- [16] Victoria University, "EAP 5B (VNUPE5B)." Accessed: Sep. 22, 2026. [Online]. Available: <https://www.vu.edu.au/units/eap-5b-vnuep5b>