

Wenyuan “Rafael” Wu, PhD Candidate

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Expertise

PhD researcher at the intersection of generative AI and persuasive information systems. Using Design Science Research, my work delivers practical artifacts and a nascent design theory for *personalized adherence companions* — grounded in the Innosuisse-funded Digital Companion project and collaboration with ZHAW. Across chronic condition management, mental health, and education, the goal is to bridge the adherence gap with systems that strengthen adherence while scaling the work of human experts.

Employment History

- 2023 – present 📌 **Research Assistant & PhD Candidate.** Information Management Research Group, Department of Informatics, University of Zurich, Switzerland.
- **Applied LLM systems:** built and evaluated conversational agents for behavior change in chronic-condition management, AI-blended psychotherapy (CBT), and education, ranging from prompt design and dialogue orchestration through to user studies.
 - **Open source:** co-developed *PROMISE*, a model-driven framework that drives multi-turn LLM dialogue through hierarchically nested state machines; published and released publicly.
 - **Deployment:** ship LLM services both on managed cloud (Azure OpenAI) and self-hosted on Linux servers (Ansible, Nginx), keeping privacy-sensitive health data on premises where required.
 - **Delivery & collaboration:** work within a four-partner Innosuisse consortium (ZHAW, UZH, COBEDIAS, Helmedica AG), partnering with ZHAW on development and evaluation; systems field-tested in clinics across Canton Zurich.
 - **Teaching & mentoring:** teaching assistant for *Computer-Supported Cooperative Work* (2024 – 2027); supervision of master's/bachelor's theses and student projects.
- 2021 – 2022 📌 **Assistant to Doping Control Officer.** Clearidium A/S, Denmark.
- 2018 📌 **Business Consultant.** Cromine GmbH, Germany.

Education

- 2023 – 2027 📌 **PhD in Information Systems (expected mid-2027), University of Zurich.**
Thesis title: *Personalized Adherence Companion: Realizing Human-Centric Persuasion Through Generative Artificial Intelligence.*
- 2018 – 2022 📌 **M.A., University of Zurich.** Computational Linguistics.
Thesis title: *Cross-lingual Projection of Text Zoning Labels for Job Advertisements.*
- 2012 – 2017 📌 **B.A., Lanzhou University.** German Language and Literature.
Thesis title: *Assessment of the Quality of Neural Machine Translation (NMT) in German-Chinese Translation.*

Research Publications

Conference Proceedings

- 1 **W. Wu**, S. Egger, A. Bucher, I. Vashkite, M. Dolata, and G. Schwabe, “Designing persuasive artificial intelligence for mental health: A prioritization framework to enhance trust and engagement,” in *Persuasive Technology*, K. Sumi, R. Ali, and R. Legaspi, Eds., Cham: Springer Nature Switzerland, 2026, pp. 420–434.  DOI: 10.1007/978-3-032-19687-3_31.
- 2 J. Heierli, E. Gavagnin, **W. Wu**, D. Händler-Schuster, M. Dolata, G. Schwabe, and A. d. Spindler, “From conversation to agent: LLM-driven design of structured healthcare agents,” in *Procedia Computer Science*, ser. 16th International Conference on Emerging Ubiquitous Systems and Pervasive Networks / 15th International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare, vol. 272, 2025, pp. 269–276.  DOI: 10.1016/j.procs.2025.10.205.
- 3 **W. Wu**, M. Dolata, A. de Spindler, and G. Schwabe, “Persuasive prompting: The case of digital health,” in *ECIS 2025 Proceedings*, vol. 10, 2025, ECIS2025–1051.  URL: https://aisel.aisnet.org/ecis2025/health_it/health_it/10.
- 4 **W. Wu**, J. Heierli, M. Meisterhans, A. Moser, A. Färber, M. Dolata, E. Gavagnin, A. de Spindler, and G. Schwabe, “PROMISE: A framework for model-driven stateful prompt orchestration,” in *Intelligent Information Systems*, S. Islam and A. Sturm, Eds., Cham: Springer Nature Switzerland, 2024, pp. 157–165.  DOI: 10.1007/978-3-031-61000-4_18.

Journal Articles

- 1 A. Bucher, S. Egger, I. Vashkite, **W. Wu**, and G. Schwabe, “‘It’s Not Only Attention We Need’: Systematic review of large language models in mental health care,” *JMIR Mental Health*, vol. 12, no. 1, e78410, 2025.  DOI: 10.2196/78410.

Under Review

- 1 **W. Wu**, M. Dolata, A. de Spindler, and G. Schwabe, “‘What Does AI Care?’: The paradox of empathy in a persuasive chatbot for adherence to treatment,” Department of Informatics, University of Zurich, 2026.
- 2 **W. Wu**, N. Kannengießler, S. Egger, D. Staehelin, I. Vashkite, M. Dolata, A. de Spindler, A. Sunyaev, and G. Schwabe, “Persuasive artificial intelligence: Conceptualization, architecture, applications, and research agenda,” Department of Informatics, University of Zurich, 2026.

Skills

AI Engineering	 LLM applications on hosted APIs (Anthropic, OpenAI, Google) and self-hosted models; agent architecture and stateful prompt orchestration; prompt engineering, RAG, fine-tuning, and evaluation design; AI-assisted development with Claude Code.
ML & NLP	 Natural language processing, machine learning, data science; PyTorch, Hugging Face.
Infrastructure	 Linux administration, Ansible, Nginx, Docker; Azure OpenAI, GPU-backed model serving, on-premises deployment.
Programming	 Python, Java, Go, R, SQL, Bash, JavaScript; Git.
Methods	 Design science research, mixed methods (surveys, interviews, user data), experiment design, statistics.
Languages	 Mandarin Chinese (native), English (C2), German (C1, TestDaF 5-4-4-5).

Extracurricular Activities

- 2027  **Program Committee**, PERSUASIVE conference.
- 2026  **Volunteer**, Davos Tech Summit.
- 2025  **Certified Peer Reviewer**, Elsevier Researcher Academy.