

22F., No. 1, Xinfu Rd., Banqiao Dist
New Taipei City 220691
Taiwan (R.O.C)
☎ +886 912 085 209
✉ shaka@libgirl.com
in [shakascchen](#)

Shaka (Shih-Chia) Chen

Education

- June 2011 **Bachelor of Science in Computer Science**, *National Taiwan University*
June 2011 **Program Certificate in Neuroscience**, *National Taiwan University*

Research Interests

Artificial Intelligence (AI), especially Artificial General Intelligence (AGI)
Spiking Neural Network and Neuromorphic Computing
AI Philosophy and its Technical Application
AI Foundation Models

Relevant Experience

2016–2022 **Founder**, *Libgirl Co., Ltd.*

At Libgirl, we explored strategies to balance business viability with the mission toward Artificial General Intelligence (AGI). [Key projects and achievements \(link\)](#):

- Created an open-domain ChatBot primarily in Mandarin. Its user base reached 0.13‰ of the Taiwanese population within 2 months.
- Being one of the first companies in the world which developed Machine Learning Operations (MLOps) products, collaborated with Umbo CV surveillance company.
- Developed and open-sourced a [Spiking Neural Network \(SNN\) framework](#). On GitHub, [it ranks first](#) (status captured on [26 Aug 2024](#)) among SNN frameworks written in Rust programming language.
- Published two U.S. patent applications.

2012–2015 Individual Research

Individual research on how to achieve AGI. Research output was transferred into technological foundations of Libgirl Co., Ltd. Individual research topics included:

- Turing Complete Genetic Programming
- Wittgenstein Philosophy and AI Philosophy
- AGI Blueprint: From Logical Atomism, Global Ontology Network, Associative Learning, Specialized Distributed Computing Architecture, to Human-Computer Interface

July–August **Research Intern**, *Institute of Biomedical Sciences, Academia Sinica*

2005 In vivo neuroscience study of pain in mice.

Teaching Experience

July–August **Guest Trainer**, *YPCloud Inc.*

2024 Introduction to AI Concepts and Technical Foundations.

May 2020 **Guest Lecturer**, *College of Management, National Chiao Tung University*

Single Lecture on AI Industry and Principles of Intelligence.

Publications

2022 Hsu, S. H., & Chen, S. C. (2022). *Training method and computer system using the same* (U.S. Patent Application No. US-20220092445-A1). United States Patent and Trademark Office. <https://patents.google.com/patent/US20220092445A1/en> (Abandoned)

2022 Hsu, S. H., & Chen, S. C. (2022). *Control method and computer system using the same* (U.S. Patent Application No. US-20220092467-A1). United States Patent and Trademark Office. <https://patents.google.com/patent/US20220092467A1/en> (Abandoned)

Conference Presentations

2020 *Principles of Intelligence*, Conference for Open Source Coders, Users & Promoters ([COSCUP](#))

Other Work Experience

2022 **Founder**, *Ackfock*

Developed a [hosting platform for tiny memos of understanding \(MOUs\)](#), enabling users to accumulate pre-contract memos that facilitate the transition to official contracts. All front-end code was written in Common Lisp that further generated all HTML, CSS, and JavaScript code.

2013 **Software Engineer**, *Skysource Technologies*

Migrated an employee management system from ASP .NET Webforms to ASP .NET MVC and conducted research on testing methodologies for that employee management system.

2012 **Software Engineer**, *National Taiwan University*

Developed a pop science streaming platform for the Center of Advancement for Science Education. Main responsibility was iOS front-end development.

2009–2011 **Co-Founder**, *OnionSky*

Co-founded and managed a non-commercial video website for campus students. Responsibilities included team management, back-end development using Ruby on Rails, and UNIX system administration.

2009–2011 **Freelancer**

Projects included debugging for an app on Nokia N95 in J2ME, National Taiwan University campus news website, data visualization in MATLAB, and a rice information webpage.

Volunteer and Extracurriculum

2022–2023 **Co-Organizer**, *Diamond Way Buddhism Taipei Group*

[Diamond Way Buddhism](#) is a Western branch of Tibetan Buddhism with 640 centers around the world. I hosted the weekly meditation for its Taipei Group. I also collaborated with other members to organize Buddhist courses. Their nationalities include the US, German, Poland, Russia, and more.

2005–2006 **President**, *Chien Kuo High School Orchestra*

I led our orchestra and string quartet to win the 2006 champion of National Music Competition in high school batch in Taiwan.

Skills

Editor - [Emacs](#)

System - [UNIX System Administration](#)

Coding - [Common Lisp](#), [TypeScript/JavaScript](#), [PostgreSQL](#), [Python](#), [Rust](#)

Teamwork - Leadership, Communication, Task Prioritization, Team Management

Personal Statement

Artificial General Intelligence (AGI) and entrepreneurship define me. As the founder of Libgirl Co., Ltd., an AGI-focused company I have since sold, we launched an open-domain ChatBot whose user base reached 0.13% of the Taiwanese population, became one of the first companies in the world to develop Machine Learning Operations (MLOps) software, and published two U.S. patent applications. I want to enter the PhD program in Computer Science at Columbia University. PhD training will deepen my technical strength and extend my connections, which is the best choice for a prospective industrial researcher and my next AGI startup journey.

My research interests primarily lie in pursuing AGI through a top-down approach, though I am equally enthusiastic about focusing on specific AI sub-domains. Given the opportunity to explore AGI from a top-down perspective, I am particularly interested in AGI evaluation and related areas, such as the evaluation of Foundation Models (FMs). This focus stems from my deep, long-term exploration of the nature of intelligence itself. To effectively evaluate AGI, we must first answer the fundamental question: ‘What is AGI?’ Conversely, developing robust evaluation frameworks will enable us to distinguish between AGI and non-AGI systems, helping to shape the operational definitions that drive advancements in AI and AGI.

I can contribute to a research group with my solid engineering skills, interdisciplinary research potential, and teamwork capability. All of these are laid out below.

Solid Engineering Skills. I can be one of the trusted technicians that every AI-related lab requires. I have more than 10 years of software engineering experience. My proficient tech stack includes [Common Lisp](#), [TypeScript/JavaScript](#), [PostgreSQL](#), [Python](#), [UNIX system administration](#), and [Emacs](#). Other tech skills include [Rust](#), React.js, AWS/GCP, and more.

Applicant: Shaka Chen
LinkedIn: <https://www.linkedin.com/in/shakascchen>
Email: shaka@libgirl.com

Interdisciplinary Research Potential. I am well-positioned to enhance the visibility of publications by extending their relevance to other research fields. Moreover, my ability to bridge multiple areas of study aligns well with the interdisciplinary focus of many research groups. My patent applications, [US-20220092445](#) and [US-20220092467](#), are Machine Learning (ML) publications, with the former derived from research in Spiking Neural Networks (SNN), particularly reservoir computing. In addition, my conference presentation titled [Principles of Intelligence](#) at [COSCU 2020](#), Taiwan's leading open-source conference, showcased a fusion of concepts from Artificial Neural Networks (ANN), Neuroscience, and SNN to Wittgenstein's philosophy. Alongside my startup team, I also developed an [SNN framework](#) that currently [ranks first](#) (as of [26 Aug 2024](#)) among SNN frameworks written in Rust programming language.

Teamwork Capability. I could help a principal investigator manage the lab members if needed. As for my management skills, I led with a hands-on approach and worked closely with team members. By doing so, I successfully ran a startup company for 6 years. Here's a [Technology Document Compilation](#) for a glimpse of our team's output.

Beyond my immediate contributions, I believe I represent a valuable investment for the research group, the PhD program, and Columbia University. My long-term goal is to establish another AGI startup, leveraging both my entrepreneurial experience and the advanced training offered by this program. I see my high-ceiling career as a significant asset, poised to amplify the impact and reputation of the research group and the university. Even if my future ventures face setbacks, I will continue my contributions as a dedicated researcher within leading companies or institutions, making me a low-risk, high-reward proposition for the program and the university.

In summary, upon completing my PhD, I aim to transition into industrial research and, when the time is right, launch my next AGI startup. AI has limitless potential as long as we continue to push its boundaries, and I am fully dedicated to advancing these limits while ensuring that AI development remains a force for the benefit of all humanity.