

Tianyu (Eric) Zhu

eric@ericz.me | NYC | +1 929 268 5588 | ericz.me • as206628.net
linkedin.com/in/tianyu-zhu-577356250 • github.com/ericzty

EDUCATION

Stevens Institute of Technology Charles V. Schaefer, Jr. School of Engineering & Science
Bachelor of Science in Computer Science

Hoboken, NJ
Expected May 2026

Honors: Global Scholarship

Coursework: Data Structures, Discrete Structures, Algorithms, Statistics, Linear Algebra, Computer Architecture and Organization

SKILLS

Programming: Node.JS, Python, Golang, bash, POSIX shell, HTML/CSS/JS, Rust, BPF, C++, C, Java, Scheme, various CI/CD tools, git

Systems Administration: NGINX, Apache, Docker, Debian, RHEL, Postgres, libvirt/KVM, Proxmox, LXC, Grafana, Prometheus, Thanos.io, Ansible, Puppet

Computer Networking & Security: BGP, Nftables, routerOS, IRR, RPKI, RTBH, WireGuard, OpenVPN, MTR, Netcat, Metasploit, nmap, IPS

Languages (Fluent): Chinese (Mandarin), English

PROFESSIONAL EXPERIENCES

Stevens Institute of Technology, Department of Computer Science

Undergraduate Research Assistant in collaboration with Brown and UPenn

Apr 2023 - Present

- Debugged and modified complex C++ and C codebases to trace shell scripts in order to **parallelize shell scripts**.
- Programmed crucial parts of our tool “try”, maintaining documentation and CI. “try” now has over **4.5k stars on github**.
- Debugged various Linux Kernel features mostly involving **namespaces** and mounts for “try.”
- Managed community contributions to our “try” repository, **triaging issues** of various complexity and **managing pull requests**.

Fosshost, Non-profit hosting provider

Volunteer Deputy-CTO

Oct 2021 - May 2022

- Assisted leading TechOps in maintaining a fleet of **linux hypervisors** around the world, ensuring service availability.
- **Onboarded and mentored new volunteers**, including familiarizing them with the organization and its technologies.
- Designed, deployed, and maintained a **monitoring system at scale**, maintaining server uptime and improving site reliability.

Volunteer TechOps

Oct 2020 - May 2021

- Installed and configured support system to **minimize support response time**, and Gitlab for collaboration.
- Designed and led setting up an **identity and access system (RBAC)**, allowing for better control over system permissions.
- Deployed a **global private network** to facilitate secure communications between volunteers and internal infrastructure.

RPG Research, Non-profit Community Organization

Volunteer sysadmin

Jun 2021 - Jun 2022

- Designed and deployed a **data-driven monitoring and observability system** at scale, maintaining server uptime and improving site reliability. (Grafana, Prometheus, Thanos)
 - Re-designed the network to support a new site and increase **redundancy**.
-

PROJECTS

Personal Blog, Rust(tokio, axum), Docker, CI/CD, responsive web design, high availability, SEO

- An **insanely fast website** utilizing rust’s concurrency and memory safety features. All requests are served directly from RAM.
- Deployed via a **high availability** setup, and zero hour downtime using github actions, watchtower, and nginx load balancing.
- Maintaining an active **blog** about my journey in Computer Science.

EVE, Golang, Postgres, mTLS, x506, CI/CD, Makefiles, Structured Logging

- A **hypervisor suite** for mid-scale server hosting deployments, with security and ease of usage in mind.
- Using **mTLS** to ensure secure connection between agent and main controller over any environment.
- **RESTful API** for users to control their resources, and for admins to manage users and create new machines.

AIChan, Golang, Redis, discordGo, Structured Logging, OpenAI

- A fast discord bot that allows users to interact with OpenAI APIs, with support for GPT-3.5-turbo, GPT-4, and DALL-E.
- Utilizing **Redis** to store conversation cache for fast retrieval of chat context.
- Enables dynamic **prompt engineering** via ad-hoc pre-prompting for chat APIs.

EricNet AS206628, Dual Stack Educational Network: BGP, RouterOS, Fastnetmon, Proxmox, Grafana, Prometheus, vLAN, IXP

- Provided reliable free hosting for **50+ students/open-source projects** over a cluster of servers, and BGP transit for 10+ BGP networks.
 - Developed a status checking website in Golang to **minimize incident response time**.
 - Debugged various user networking issues, triaging incidents of various complexity ranging from user error to site wide DDoS attacks.
-

ADDITIONAL EXPERIENCES

Blueprint @ Stevens

Executive Board: VP of Technology

July 2023 – Present

Castle Point Anime Convention

Webmaster Team

Oct 2022 – Present

- Assisted in the designing of the REST API for vender on-boarding portal.
- Designed the infrastructure and DevOps process for internal projects.

Stevens Class of 2026 Online Community

Founder & Director

Nov 2021 – Present

- Lead a team to foster an inclusive and welcoming environment for 700+ students to chat in.
 - Address conflicts empathetically and professionally, oversee crisis resolutions.
-

REFERENCES - Available upon request