Tianyu (Eric) Zhu

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EDUCATION

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

Hoboken, NJ

Bachelor of Science in Computer Science

Expected May 2026

Honors: Global Scholarship

Coursework: Data Structures, Discrete Structures

SKILLS

Programming: Node JS, Python, Golang, bash, HTML/CSS/JS, Rust, BPF, C++, C, Java, Scheme, various ci/cd tools

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

Apr 2023 - Present

• Debugged and modified complex C++ and C codebases to trace shell scripts in order to parallelize shell scripts.

Fosshost, Non-profit hosting provider

Volunteer Deputy-CTO

Oct 2021 - May 2022

- Assisted leading TechOps in maintaining a fleet of servers around the world, ensuring service uptime.
- 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 accesses.
- Deployed a multi-site global aggregate 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

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 for.
- Enables dynamic prompt engineering via ad-hoc pre-prompting for chat APIs.

Based Development, Developer Collective

Apr 2022 - Present

- Orchestrating the development of programming projects among software developers of varying experience.
- Offering resources and mentoring software developers.

EricNet AS206628, Dual Stack Educational Network

Mar 2020 - Present

- 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.

ADDITIONAL EXPERIENCES

Blueprint @ Stevens

Tech Team: Head of Infrastructure

May 2023 - Present

Castle Point Anime Convention

Wehmaster 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 Linux User Group

Executive Board: Secretary

Apr 2023 – Present

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.

REFERENCES - Available upon request