Tianyu (Ezri) Zhu

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EDUCATION

Stevens Institute of Technology *Bachelor of Science in Computer Science, Minor in Economics*   Hoboken, NJ
Honors: Global Scholarship   Expected May 2026
Coursework: Data Structures, Discrete Structures, Algorithms, Statistics, Computer Architecture and Organization

SKILLS

Programming: Node.JS, Python, Golang, bash, POSIX shell, HTML/CSS, Javascript, Rust, BPF, C++, C, Java, Scheme, CI/CD tools, git, Postgres
Systems Administration: NGINX, Apache, Docker, Debian, RHEL, libvirt/KVM, Proxmox, Grafana, Prometheus, Thanos.io, Ansible, Puppet
Computer Networking & Security: BGP, Nftables, routerOS, IRR, RPKI, RTBH, WireGuard, OpenVPN, MTR, Netcat, Metasploit, nmap, IPS

PROFESSIONAL EXPERIENCES

Stevens Institute of Technology, with Brown University and University of Pennsylvania
Undergraduate Research Assistant   Apr 2023 - Present
- Debugged and modified complex C++ and C codebases to trace shell scripts in order to **parallelize shell scripts**.
- Utilized various **Linux APIs** via POSIX script to develop parts of our tool "try", as well as writing documentation and CI.
- Debugged various Linux Kernel features mostly involving **namespaces** and mounts for "try."

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** that enhanced the team's observability..

Volunteer TechOps   Oct 2020 - May 2021
- Installed and configured support system to **minimize support response time**, and Gitlab for collaboration.
- Led in designing 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 systems administrator   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 (ericz.me**)**, Rust, Docker, CI/CD, *responsive web design*, *high availability*, SEO
- A personal website utilizing ***rust's*** concurrency and memory safety features. All requests are served directly from RAM.
- Used Github Actions, Watchtowers, Nginx with load balancing, resulting in a **high availability** setup..
- 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.

EzriCloud 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
- Lead the technology team to develop and maintain internal tooling, compute infrastructure, and documentation to sustain our mission.
- Assisted other teams on their CI/CD pipelines to speed up development.
- Participate in executive board meetings to provide advice on the technical side of projects, ensuring that our users' needs are fulfilled.

Stevens Linux User Group
Executive Board: Secretary   Apr 2023 – Present
- Presided over executive board meetings to ensure due diligence and compliance with the student government and constitution.
- Assisted on various Linux related events, assisting other students in installing and maintaining their Linux machines.

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