

Crystal Zhan

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EDUCATION

University of California San Diego

Oct. 2020 — June 2024

Bachelor of Science in Cognitive Science — Specialization in Design and Interaction

3.9 GPA, Provost Honors

Relevant Coursework:

Computer Science: Data Science in Practice, Software Tools, Data and Model Programming, Databases

Design: Design of Everyday Things, Prototyping, Usability & Information Design, Interaction Design, Product Design

EXPERIENCE

Information Security Intern | *Jump Trading*

June 2023 — Aug. 2023

- Analyzed terabytes of firewall metrics from **Clickhouse** with **SQL**, **Python**, and **Pandas** to find traffic abnormalities for alerts, such as alerting on traffic from suspicious ports
- Created pipeline to extract data from proprietary VPN logs using **Pandas**, insert them into **Clickhouse** with **SQL**, and send them into a **Grafana** dashboard to list information like latency, errors, and kernel panics

Instructional Assistant — Computer Science Department | *UCSD*

Jan. 2023 — June 2023

- Taught Programming Tools & Techniques to **650+** students
- Assisted **100+** students in lab with confusion points and facilitating group work about **Linux CLI**, **Git** version control, **Bash scripting**, **JUnit**, and **Vim**
- Wrote lab assignments for students and graded their lab reports

Linux System Administrator | *Garmin*

June 2022 — Sept. 2022

- Collected logs and metrics from **300+** **Pacemaker** and **HAProxy** servers for more observability
- Employed **Kafka**, **Prometheus**, **Elasticsearch** and **Logstash** with support from **Ansible** and **Puppet** to display data in **Grafana** dashboard

Cyber Intern | *CodeDay*

June 2020 — July 2020

- Created phishing campaign with **GoPhish** and **Digital Ocean**, phished 20 employees out of 140 emailed
- Utilized **GVM 11** (vulnerability scanner) to look at vulnerabilities of specific domains

PROJECTS

Rubot | *Github*

- Contributing to open source Discord bot by adding user reminder functionality and notifying users of class vacancies in **Typescript** with a **PostgreSQL** server
- Writing Bash scripts to streamline bot deployment

Sheepish — CalHacks 2023 | *Github* | *Project Report*

- Created web game to help voice actors practice by transcribing and measuring emotion in speech using AI
- Designed in Figma and implemented in **React** with **Typescript**

TECapp — MSI Hackathon | *Github* | *Project Report*

- Created mobile app and website for gaming cafe staff, allowing NFC check in and user/PC session management
- Implemented in **React Native** with **Typescript** and **Firebase** backend

Google Scholar Redesign | *Case Study*

- Lead team of three to redesign Google Scholar through user interviews with beginner and experienced researchers, prototyped hi-fis and lo-fis using **Figma**

Pokemon Analysis: How Did Fairy Type's Introduction Affect Dragon Type? | *Project Report*

- Analyzed the effects of different Pokemon types in competitive Pokemon battling using **Pandas** for data cleaning, **Seaborn** to compare temporal data using graphs, and **SciPy** for T-test analysis

RESEARCH

MedTech Horizons

Jan. 2022 — Oct. 2022

- Created workshop with 9 attendees from medical start-ups through stakeholder maps, personas, and different facilitation methods to gain insights on how to streamline the FDA's medical device approval process

SKILLS

Programming Languages: Python, Bash, SQL, Typescript, Java

Administration Tools: Clickhouse, PostgreSQL, Grafana, Docker, Podman, Jenkins, HAProxy, Kafka, Prometheus, Ansible, Github Actions, Jinja2, Elasticsearch, Kibana, Logstash, Loki, Pacemaker, Filebeat

Technologies: Linux CLI, Git, Visual Studio Code, Jupyter Notebook, React, Pandas, Numpy, Seaborn, JUnit