

# ZANE SCHENK

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✉ \*\*\*\*\*@gmail.com

🌐 <https://zaneschenk.com/>

## TECHNICAL SKILLS

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**Programming Languages:** Python, Java, C#, HTML, CSS, JavaScript / TypeScript, SQL, C / C++, MATLAB, Lua, Swift, Dart  
**Frameworks, Databases, Libraries, and Testing:** .NET, Flask, Nuxt / Vue, Bootstrap, Node.js, Koa, Express, JUnit, JEST, Postman, Docker, Maven, MariaDB [MySQL], PostgreSQL, Redis, NATS, MVC, OpenCV, JavaFX, PyGame, NumPy, Numba, tkinter, unittest  
**Software Engineering:** Full-Stack Development, API Development, Web Development, Data Structures + Algorithms, OOD/OOP, CI/CD, DevOps, AWS, Source Control [Git/GitHub], Unit Testing, OAuth, Agile/Scrum, JIRA, Optimization  
**IT:** Apache + Nginx, Database Administration, Hosting, Networking, Hardware Servicing, Windows, Linux, MacOS

## EDUCATION

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**Master of Science (M.S.) - Computer Science** [Aug 2024 - TBD]  
Arizona State University, Tempe, AZ  
**Bachelor of Science (B.S.) - Computer Science** [Graduated: May 2024]  
Arizona State University, Tempe, AZ [Honors: Summa Cum Laude]

## PROFESSIONAL EXPERIENCE

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FOX Corporation, Tempe, AZ

**Broadcast Engineer I** [June 2024 - Present]

- Designed and developed a **central service application** and custom test suite utilizing Express, and WebSockets to be used by Fox operators **for managing live, on-air content playlists**
- Solely responsible for the end-to-end development process and complete documentation of this service

**Broadcast Engineering Intern** [Sept 2023 - June 2024]

- Engineered and innovated a solution for the **migration and management of Fox's global DCIM**
- Independently **reduced a codebase by over 2000 lines in two weeks** through refactoring and design patterns; this included the designing and implementation of a custom wrapper library to enhance API operations and significantly improve efficiency, performance, and readability
- Collaborated with interns and Fox Tech teams including IT and Cloud to automate and deploy solutions on AWS
- Personally developed utilities for **aggregating and visualizing daily XML log data** of events aired on all Fox networks.
- Full-Stack development** for confidential, internal infrastructure using modern frameworks

**Lead Full-Stack Developer + IT Intern - DEXTERS Lab [ASU Research Group], Tempe, AZ** [Aug 2023 - May 2024]

- Designed, developed, and tested a full-stack web app for ASU's Dwarf & EXoplaneT Exploration and Remote Sensing Lab
- Migrated a local Python calculator's functionality for **exoplanet atmosphere visualizations** to a Flask API
- Personally optimized the previously-developed calculator code leading to an **80%+ reduction in runtime**
- Designed a PostgreSQL database and automated dynamic structural verification
- Automated the conversion and insertion of thousands of atmospheric data models from pickle files to database entries
- Developed and deployed DEXTERS Lab's official research website** via a custom hosting solution using GitHub Pages and a high-performance Ubuntu desktop on-campus

## PROJECTS

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**zyBot: Full-Stack Application Development + IT** [Jun 2022 - Present]

- Implemented a Discord bot with an interactive user XP system, virtual pets, over 30 commands and **hundreds of users**
- Utilized Discord's APIs and additional third-party's APIs including Riot Games
- Built **cybersecurity measures** including SQL injection prevention and **proprietary credential hashing**
- Configured and maintained local databases with automatic daily backups for data integrity
- Automated database setup and structure verification for MariaDB using adaptable and prepared SQL queries
- Created utility functions and scripts to handle **stat recalculations, dynamic element reconnections, and DDNS management**
- Designed a secure **Flask API and dynamic website** that use Discord's OAuth to provide users with a management dashboard in addition to account statistics and functionality documentation
- zyBot, zyBot API, and <https://zybot.xyz/>** have all been built from scratch and are developed, managed, and hosted by me