

ZANE SCHENK

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🌐 <https://zaneschenk.com>

TECHNICAL SKILLS

Programming Languages: Python, Java, C#, JavaScript / TypeScript, HTML, CSS, SQL, C / C++

Cloud and Infrastructure: AWS, Databricks, Terraform, Docker, Kubernetes, Linux, Apache, Nginx, Jenkins, Git / GitHub / Bitbucket, CI/CD, Cloud Architecture, Networking

Frameworks and Data: PostgreSQL, Node.js, Express, Flask, Electron, PySpark, .NET, Nuxt / Vue, MariaDB, MySQL, Redis, Koa, Maven

Software Engineering: Full-Stack, API and OAuth Integration, ETL / Data Pipelines, CRM / OData Integration, DSA, OOD / OOP, DevOps, Unit Testing, Optimization, Database Architecture

PROFESSIONAL EXPERIENCE

Software Engineer - USA Managed Care Organization, Phoenix, AZ

[Sept 2025 - Present]

- **Architected and led implementation of a configuration-driven Databricks lakehouse framework** using Bronze/Silver/Gold layers, with a centralized dynamic context, dataset-level stage overrides, and schema-driven table management, reducing new data-source onboarding to defining a small set of parameters without modifying core pipeline code
- **Pioneered local development for Databricks pipelines** by implementing environment-aware PySpark/Databricks Connect execution and building **MIMIC, a zero-cost CLI for simulating Silver/Gold transformations** and data cleaning locally; achieved **3M+ records/minute ingestion throughput, 80%+ test coverage, and zero SonarQube-reported vulnerabilities**
- **Implemented infrastructure as code (Terraform)** templates to provision Databricks workspaces, VPC networking components, and analytics infrastructure including QuickSight environments
- **Led migration of millions of legacy IBM records to Creatio CRM**, building automated schema-mapping and validation pipelines to ensure data integrity
- **Built resilient Python libraries for the Creatio OData API and IBM DB2**, supporting high-volume CRM data ingestion and improving reliability of cross-system integrations

Software Engineer - Fox Corporation, Tempe, AZ

[Jun 2024 - Jan 2025] | [Mar 2025 - Jun 2025]

- **Full-stack development on a project under NDA**, leading the development of a cross-platform Electron app built with Node.js, utilizing WebSockets for real-time communication and a reactive UI for enhanced user experience
- **Built CI/CD pipelines using GitHub Actions and AWS** for automated deployments, code signing, and security scanning
- **Led end-to-end design and development** of a central load-balancing API application and comprehensive test suite using Express and WebSockets for Fox operators managing live on-air content playlists
- **Developed a JavaScript raw packet decoder for the SMPTE 2110-40 ANC standard**, improving data handling and processing for real-time broadcast workflows
- **Created a JavaScript closed-caption encoder and decoder for EIA-608 packets** for dashboard reporting and visualizations
- **Integrated AI models** via Hugging Face and AWS for real-time caption processing

PROJECTS

zyBot: Full-Stack Discord Platform — zybot.xyz

[Jun 2022 - Present]

- **Architected and operate a self-hosted full-stack Discord platform** serving hundreds of users, consisting of a Discord bot, Flask REST API, web dashboard, and PostgreSQL database with 30+ commands and persistent user systems
- **Engineered a containerized development and deployment environment with Docker**, enabling consistent local and production deployments with automated PostgreSQL provisioning, schema validation, and database migrations
- **Implemented production software engineering practices** including automated linting, unit testing, CI/CD, input validation, SQL injection prevention, and secure credential hashing to maintain code quality and application security
- **Own the platform's infrastructure, networking, security, and operations**, independently managing Linux hosting, reverse proxying, DNS/DDNS, TLS, container orchestration, backups, and service deployment

EDUCATION

Master of Science (M.S.) - Computer Science

[Jan 2025 - 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]