

# William D. Orlopp

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Enhanced Descriptions and Projects: <https://www.orlopp.dev>

## EDUCATION

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**University of California, Davis** *Sep 2024 – Mar 2026*  
Computer Science, M.S. (4.0/4.0 GPA)

**University of California, Davis** *Sep 2021 – Jun 2024*  
Computer Science, B.S. (3.6/4.0 GPA)

**Relevant Coursework:** Data Structures and Algorithms, Algorithm Design and Analysis, Machine Dependent Programming, Object-Oriented Programming, Gameplay Programming, Probability/Statistics for Computer Science, Software Engineering, Computer Graphics, Artificial Intelligence, Operating Systems, Cryptography.

## WORK EXPERIENCE

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**Samsung – Assistant Engineer, Back-End Server Intern | Mountain View, CA** *Jun 2025 – Aug 2025*

- Built GraphQL API in Ruby on Rails to dynamically list and format S3 objects with public URLs.
- Added creative duplication in the back-end and React/Typescript front-end, saving AdOps 5 minutes per creative.
- Developed end-to-end tests with Cypress to ensure feature and pipeline stability.

**UC Davis Molecular Computing – Graduate Student Researcher | Davis, CA** *Sep 2024 – Dec 2025*

- Enhanced *scadnano*, a DNA nanostructure design tool, using Dart, Python, and React.
- Optimized platform performance and added new design features based on DNA nanostructure design research.
- Developed a standalone, cross-platform executable version to support offline use.

**#include – Platforms Team Developer | Davis, CA** *Nov 2024 – Jun 2025*

- Engineered authentication (OAuth) system using Auth.js for an E-Store management platform.
- Integrated backend with Prisma, Auth.js, NextJS, and Apollo in collaboration with team members.
- Developed frontend integration using React for seamless user interaction.

**Freelance – Full-Stack Software Engineer | Remote** *Sep 2024 – Dec 2024*

- Launched and scaled a secure website from initial release to 1,000+ daily visits within 3 months.
- Developed a secure portfolio website (<https://unauthorizedkitty.art>) with OAuth and Better Auth.
- Built a scalable backend with Prisma, GraphQL, PostgreSQL, and Amazon S3 for image management and metadata.
- Implemented containerized monitoring and page view tracking with Docker for reliable production operation.

**Sun-Pro USA – Full-Stack Software Engineer Intern | Sacramento, CA** *Jul 2022 – Jun 2024*

- Upgraded hardware/software systems and resolved critical performance bottlenecks.
- Diagnosed and fixed excessive CPU usage caused by high-frequency file reads.
- Authored detailed documentation and failure response procedures to ensure continuity and fault recovery.

## PROJECTS

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**cafeBot – Creator/Lead Maintainer | Java, React, NextJS, ExpressJS, Maven/Gradle** *Apr 2021 – Present*

- Engineered a Discord bot serving 200,000+ users across 2,200+ servers using Gradle tests to ensure reliability and scalability.
- Leveraged asynchronous multithreading to reduce startup time by 1500% and response latency by ~300ms.
- Built a high-performance backend using ExpressJS, NextJS, React, and Vite for an automated testing framework.
- Established an open-source development workflow, reviewing pull requests and enforcing code standards.

**Proxy Chat – Creator | Java, Gradle, Bungee/Velocity API, Discord API** *Feb 2024 – Present*

- Developed proxy plugin enabling cross-server communication with configurable business features.
- Integrated Discord API for real-time notifications and user activity tracking.
- Designed modular toggles for chat, join/leave events, and server switches.

**Back to the Jungle – Project Lead | C#, Unity** *May 2023 – Jun 2023*

- Led a team in building a 2D endless runner game, managing coordination via GitHub.
- Developed player/enemy movement, collision logic, and coin spawning systems.
- Delivered polished gameplay using Unity's scene management and asset tools.

## SKILLS

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**Programming Languages/Frameworks:** Java, Spring Boot, C, C++, C#, Python, Javascript, Typescript, ExpressJS, React, NextJS, Rust, LaTeX, HTML/CSS/SCSS, Prolog, MySQL, PostgreSQL, SQLite, Kotlin.

**Tools and Technologies:** JetBrains IDEs, Visual Studio Code, Unity, Microsoft Office Suite, Git, GitHub, Docker, Node, Cargo, Unix/Linux, Maven, Gradle.