William D. Orlopp

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EDUCATION

University of California, Davis *Sep 2024 – Jun 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

UC Davis Molecular Computing – Graduate Student Researcher | Davis, CA *Sep 2024 – Present*
- 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 – Present*
- 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 Software Engineer – Artist Portfolio Website | Remote *Sep 2024 – Dec 2024*
- Developed a secure portfolio website with OAuth and Auth.js for an artist.
- Built backend with Prisma, GraphQL, PostgreSQL, and Amazon S3 for image management and metadata.
- Automated updates and page view tracking with Docker and Grafana for seamless 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

cafeBot – Creator | Java/Spring Boot, Unix, ExpressJS, Maven, Gradle *Apr 2021 – Present*
- Discord bot serving 160,000+ users across 2,100+ servers.
- Leveraged asynchronous multithreading to reduce startup time by 1500% and response latency by ~300ms.
- Built a high-performance backend using Spring, JPA, and Hibernate.

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

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.

Enhanced Descriptions and Projects: https://www.orloppw.com