

Christian Doud

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SKILLS

- **Frontend Development:** *ReactJS, HTML/CSS, Bootstrap, React Native, Vite, TypeScript*
- **Backend Development:** *Node.js, Spring Boot, Python, Java, Flask*
- **Databases:** *MySQL, SQLite, Firebase, PostgreSQL*
- **Tools & Frameworks:** *Git, RESTful APIs, Figma, Android Studio*
- **Additional Skills:** *C/C++, JavaScript (ES6+), MATLAB, MIPS, LaTeX, Microsoft Office, VSC, Docker, AWS, Linux/Unix, Wordpress*

EXPERIENCE

Pathforce Technologies, Inc. - *VR Medical Applications - Software Engineer* *September 2024 - November 2025*

- Built Quest 3 VR pathology features (Unity/C#/OpenXR) for WSI review/annotation; stabilized frame timing and cut dropped frames in large slides.
- Reduced GCP spend 87% (\$16.5K→\$2.09K/mo) by migrating to Cloud Run, adding Storage lifecycle policies, and NGINX/CDN caching—zero downtime.
- Shipped full-stack WSI demo (Angular + Spring Boot) with Orthanc DICOMweb (QIDO/WADO/STOW); optimized CORS/tile delivery and hardened IAM/monitoring.

Paracon Technologies - *Dental AI Software - Software Engineer (Dental AI)* - <https://www.paracontx.com> *May 2024 - May 2025*

- Took over the development of the entire software ecosystem for an AI-powered detection for dental imaging platform, work consisting of frontend, backend, IoT integration, and utilization of git for version control.
- Containerized services on AWS EC2 with Kubernetes (health checks, autoscaling); reduced infra cost ~35% while maintaining uptime.
- Developed a responsive Vite React-based frontend and components to Typescript and that communicates with the Raspberry Pi via WebSockets for real-time control of intraoral camera firing and control of LEDs timing.
- Programmed Raspberry Pi systems to integrate with intraoral cameras capture, developed LED timing and image correction logic using applied mathematics for accurate dental imaging.
- Deployed, monitored, and troubleshoot server infrastructure to ensure platform stability of the cancer detection platform and data collection.
- Developed JavaScript backend server with TFF principles to handle login, photo capture, and real-time image saving using RESTful APIs.

Telit Cinterion - *Admin Dashboard - Fullstack Developer - Innovate 2 Grow* *Jan 2023 – May 2023*

- Led the development of a responsive React-based admin dashboard with ERP use cases with Firebase integration for data handling from and UI/UX design.
- Managed project roadmap, allocated tasks, and conducted regular meetings to ensure timely delivery using CI/CD pipelines.
- Integrated Google Maps API for tool tracking, geofencing, and real-time location updates, also can be derived from JSON files.
- Provided sample construction enterprises with tool data, location tracking, and geofencing capabilities using Google Maps API.
- Enabled dynamic worksite asset management, allowing data updates on the map interface for tool and vehicle management.

Lynq App - *Social Media App Startup - Fullstack Developer* *Dec 2022 – Oct 2023*

- Translated Figma designs into responsive, functional frontend features using React Native and Expo for responsive mobile development
- Integrated Firebase API to manage data input/output and Google Maps API for address autofill.
- Implemented Firebase Authentication for secure user login, including Google Sign-In.
- Collaborated in weekly Zoom meetings, tracking team progress and providing updates to project managers with Agile methodologies.

PROJECTS

Zombie Pursuit: Survival Run - *Open Source* <https://github.com/cfdoud/Zombie-Pursuit-> *Jan 2021– May 2021*

- Developed a C++ game using Raylib with OOP design patterns and organized code with header files.
- Designed and implemented an enemy AI system for challenging progressive gameplay using classic data structures; logic with rand() library, created logic for the projection of the fireballs being launched by the player in direction to the mouse cursor.
- Solved a problem to include unlimited fireballs by recycling fireballs when going off screen, applied vector mathematics to calculate projectile trajectories and enemy pathfinding.

PONG! with Body Tracking Controls - *Open Source* <https://github.com/cfdoud/FacePong> *Jan 2023 – May 2023*

- Collaboratively crafted a rendition of Pong using OpenCV (computer vision project), NumPy, and mediapipe for facial tracking.
- Used mediapipe to map facial landmarks and enable precise control of the paddle.
- Calculated facial orientation for seamless player movement using facial matrices that tracked the whole face to control paddle.
- Programmed multiple game modes to showcase facial tracking capabilities and difficulty of game AI.
- Incorporated PyUI to provide data visualizations and statistics on player wins, direction, and high score being led by the player.

S.S.B. Tournament Page - *Open Source* <https://github.com/cfdoud/Super-Smash-Bros.-Tournament-Page> *Jan 2023 – May 2023*

- Utilized html5, CSS, and JavaScript to represent dynamic data visualization, comprehensive statistics for various fighters, ability to craft tournament brackets, and viewable meta-data analysis for both historical and upcoming events.
- Implemented a MySQL database system and utilized a RESTful API to seamlessly manage and store data, ensuring efficient retrieval and storage processes of all statistics needed for the project.
- Developed the Javascript backend using Python and Flask, enabling efficient server-side processing and API endpoints for data interaction between the frontend and the MySQL database.

EDUCATION

University of California, Merced **B.S. Computer Science and Engineering**

Graduation Date: Spring 2024