

DAVID LUO

(628) 283-6546 | davidkluo@gmail.com | [linkedin.com/in/davidkluo](https://www.linkedin.com/in/davidkluo) | github.com/davkluo | davidluo.me

EDUCATION

Georgia Institute of Technology | Master of Science in Computer Science Jan. 2024 – Present

- Operating Systems, Robotics: AI Techniques, Networks, AI, Computer Architecture, ML, Information Security

Rithm School | Full-Stack Web Development Bootcamp Nov. 2022 – Mar. 2023

University of British Columbia | Bachelor of Applied Science in Mechanical Engineering Sep. 2013 – May 2018

- Mechatronics Specialization · CSME Gold Medal for Academic Excellence
- Data Structures & Algorithms, System Software Engineering, Digital Systems & Microcomputers, Mechatronics Product Design

TECHNICAL SKILLS

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

Technologies: React, Node.js, Firebase, Express, Flask, PostgreSQL, Jest, unittest, pytest, gRPC, Protobuf, Git, GitHub

EXPERIENCE

Software Engineering Intern | Webalaxy May 2024 – Aug. 2024

- Engineered frontend and backend solutions across multiple client projects, including an SEO analysis application, a scheduling system for racing experiences, and an online plant marketplace, contributing to a 35% revenue growth during my tenure
- Architected responsive and reusable frontend components, while designing a comprehensive component design philosophy and best practices documentation to standardize development across the company
- Guided and mentored three undergraduate interns, helping them understand the company's design philosophy and component usage, while reviewing their code and promoting best practices

Software Engineering Intern | Foqal Feb. 2023 – Mar. 2023

- Developed a user-requested frontend feature in React for creating and managing message scheduling presets, enhancing user experience with a seamless one-click setup for recurring schedules
- Revamped the scheduling system architecture, transitioning to a unified offset-based timing model in order to improve consistency, testing efficiency, and system maintainability
- Resolved webpack plugin issues to extend Content Security Policy to development, strengthening early security checks

Project Engineer | Kamengo Technology May 2018 – Aug. 2022

- Spearheaded mechanical design of mission-critical material handling equipment for six projects, overseeing the full lifecycle from client engagement and proposal to design, fabrication, and delivery
- Redesigned material testing equipment with modern automated controls by incorporating an Arduino control system, resulting in a 50% increase in operational range, new speed and position control features, and improved reliability
- Authored a 150+ page operating and maintenance manual for a proprietary feeder system, playing a pivotal role in the CE certification process by ensuring compliance, streamlining usage, and facilitating proper maintenance

PROJECTS

Distributed File System

- Created a distributed file system with a synchronized server-client architecture, designing and implementing an RPC service using gRPC and Protocol Buffers to enable multi-client directory synchronization
- Engineered file watcher threads to asynchronously detect directory changes and propagate updates across all connected clients
- Ensured system consistency with mutex-based synchronization and timestamp checks, avoiding deadlocks and race conditions

Pix.ly | Photo Gallery

- Engineered a React frontend and RESTful API backend for image uploading, editing, filtering, and EXIF data extraction
- Processed geographical data from uploaded images to calculate and display the location where the image was taken
- Architected a data storage solution that stored image information in a relational database and uploaded files to AWS S3

David's Games | Game Vault

- Designed and implemented a game-vault application allowing users to sign up, play games, and earn achievements
- Incorporated CSRF protection and input validation on forms using the WTFORMS library for enhanced site security
- Architected database models for user information, stats, and achievements using many-to-many relationships