

# Darren Lin

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## EDUCATION

### University of California, Santa Cruz

Sep 2020 - Jun 2024

Bachelor of Science, Computer Engineering with Highest Honors; Computer Science Minor - GPA: 3.78/4.0

**Courses:** Software Engineering, Data Structures and Algorithms, Computer Networking, Computer Systems Design, Computer Architecture, Embedded System Design, Hardware Design, Logic Design, Electronic Circuits, Signals and Systems

## WORK EXPERIENCE

### Software Engineering Intern @ CDK Global

Jun 2023 - Sep 2023

- Revamped order step user interface to distinguish preorders from orders for all 224 Hyundai Canada dealers
- Created a new API endpoint to retrieve lender program data from Roadster's CalcEngine, utilizing provided auto loan and lease parameters including credit scores, terms, and annual mileages
- Streamlined user interface changes to lender programs comparison modal to support the addition of new data pulled and calculated by new API endpoint; resulted in a 109% increase in hits
- Generated nearly 800 hits on the compare lender programs modal across 320 dealers in 3 months

### Software Engineering Intern @ CDK Global

Jun 2022 - Aug 2022

- Facilitated the capability for generating invoices for "other" payments and processing refunds using the Stripe API across 2805 integrated dealerships
- Maintained Shift certification by porting code that sent LivePerson analytics for all live chat actions on all Roadster supported dealerships to Shift
- Developed an algorithm to auto-generate content security policies on page load for hundreds of dealerships to improve security for Roadster payment slideouts
- Collaborated with a team of 5 on a mobile application for Roadster's dealer management website for company wide hackathon

## PROJECTS

### JPEG Compressor

Scala, Chisel, sbt

- Designed Chisel modules to perform Discrete Cosine Transform, ZigZag Parsing, Quantization, and Run Length and Delta encoding
- Validated Chisel modules via rigorous unit testing, ensuring accuracy by cross-referencing outputs with Scala models
- Employed a modular architecture enabling easy integration and testing of different compression stages

### Don't Fall

Verilog, Basys3, Vivado

- Engineered a captivating single-player game on the Basys3 board, challenging players to navigate around randomly sized holes, collect coins of varying heights, and control jump height by pressing and holding the U-button
- Produced randomness for game components using 8-bit linear feedback shift registers
- Employed game logic using only basic logical operators and 2 state machines to control the player and the coin

### Tassel

JavaScript, HTML/CSS, React, AWS Amplify, GraphQL, DynamoDB, S3

- Spearheaded a team of 7, to integrate in-app messaging and a machine learning-based recommendation engine, while also organizing weekly meetings with sponsors to showcase the progress of our features
- Introduced an innovative friend request system, enabling all 120,000 alumni to seamlessly connect with each other
- Established in-app messaging using Amplify's Datastore functions and a GraphQL schema for efficient data querying

### Vroomers

JavaScript, HTML/CSS, React, Firebase

- Enabled secure login and account creation using Firebase authentication and cloud functions
- Implemented a map interface using Google Maps API to display all scheduled events and user's location
- Incorporated Firebase cloud functions to facilitate event management and incorporated Material User Interface tabs to design a comprehensive Events page for streamlined functionality

## SKILLS & AWARDS

### Languages

Scala/Chisel, Ruby on Rails, Python, C/C++, HTML/CSS, JavaScript, Verilog, Java

### Miscellaneous

Git, Linux, React, TypeScript, Vue, Firebase, AWS Amplify, GraphQL, S3, DynamoDB, sbt, MATLAB

### Awards

Dean's Honors, Eagle Scout (Apr 2019), Tau Beta Pi