

# Daniel Qu

SOFTWARE DEVELOPER

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## Skills

**Languages** JavaScript/TypeScript, Python, C, C++, Bash, SQL, HTML, CSS  
**Frameworks** React, Redux, Express, Flutter  
**Tools** Git, AWS, Jenkins, Docker, Kubernetes

## Education

### University of Waterloo - 92% GPA

B.A.Sc. IN HONOURS MECHATRONICS ENGINEERING

Sep. 2020 - Present

Waterloo, Canada

- Computer Structures and Real Time Systems, Microprocessors and Digital Logic, Data Structures and Algorithms

## Work Experience

### PlayStation - Sony Interactive Entertainment

DEVOPS SOFTWARE ENGINEERING INTERN

Sep. 2022 - Dec. 2022

AWS, Kubernetes, Jenkins

- Investigated and established a log aggregation system for containers running in EKS and EC2 to enhance telemetry data.
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### PlayStation - Sony Interactive Entertainment

FRONT END SOFTWARE DEVELOPER INTERN

Jan. 2022 - Apr. 2022

React Native, Redux, Python, Jenkins

- Debugged complex state management bugs in Redux store involving communication between apps.
- Implemented UI features to support the PlayStation Plus release.
- Monitored status of over 2000 regression tests using Jenkins and Python to improve QA efficiency.
- Achieved first prize in global company-wide hackathon by creating a React Native calendar app for the PlayStation 5.

### Dreamschools

FULL STACK SOFTWARE DEVELOPER INTERN

May. 2021 - Aug. 2021

React, Express, PostgreSQL, Stripe

- Overhauled Stripe checkout process by supporting more payment methods while simplifying the user experience.
- Improved order page load time by 10x by parallelizing API requests and leveraging advanced Stripe API features.
- Designed and implemented a complete notification system between different types of clients with the help of the Get-stream service.
- Developed an email/SMS communication system between organizations and students using Twilio and PostgreSQL.
- Took initiative to improve code quality by extracting reusable components and reorganizing app file structure.

## Projects

### Hexle - Game - Github

GROUP PROJECT

Feb. - Mar. 2022

TypeScript, React, CSS

- Contributed to hex code guessing game with returning users from over 40 countries worldwide.
- Refactored initial code and React state management to improve maintainability and readability.
- Enhanced UI across devices by using responsive CSS and implementing a "side-by-side" colour comparison feature.

### Midnight Sun Driver Dashboard - Github

MIDNIGHT SUN SOLAR CAR STRATEGY TEAM

Apr. - Sep. 2021

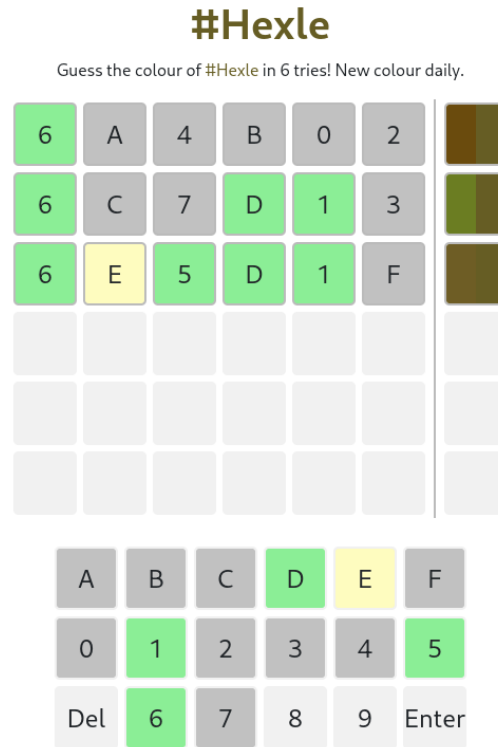
Flutter, Dart, Python

- Built digital dashboard for Midnight Sun's solar vehicle, including speedometer, battery life, target speed, and more.
- Performed CAN integration testing using mock CAN messages and Python driver code.
- Effectively used Flutter animations to direct driver attention when appropriate.

## Extra: Project Demos

Visit <https://tinyurl.com/daniel-qu-portfolio> for short video demonstrations.

## Hexle - Wordle Variant (Typescript, React, CSS)



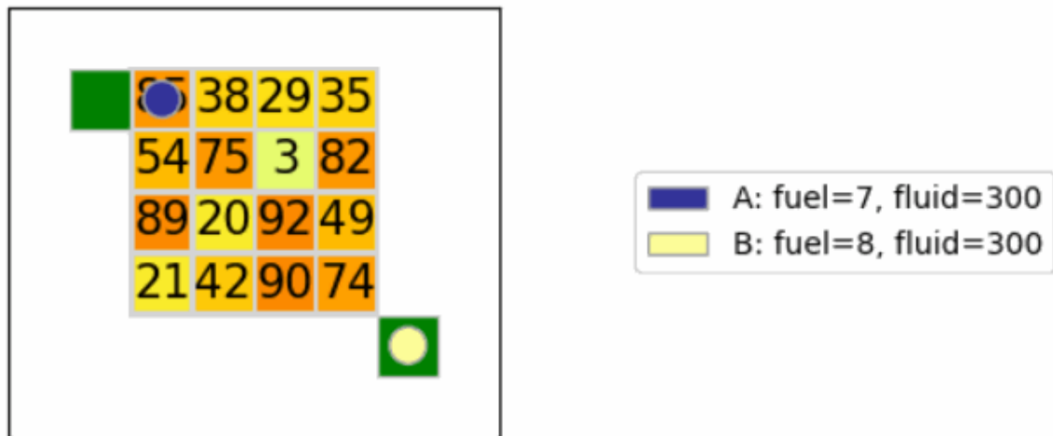
- Try the game out at [frankljin.github.io/hexle/](https://frankljin.github.io/hexle/)
- Implementing CSS animations on each guess in the near future for UI polish!

## Midnight Sun Driver Dashboard (Flutter)



- Display used as dashboard for Midnight Sun's Solar Car during an international solar car competition.
- Shows a subtle animation to alert driver when recommended speed changes.
- Used gradients effectively to improve UI and meet design specifications.

## Waterloo Engineering Competition 2020 - Programming Division (Python)



- Solved programming optimization problem with team, involving giving directions to cleaning robots.
- Carefully considered and developed algorithm to choose robot starting locations (green tiles).
- Maximized competition score by maximizing tiles cleaned, minimizing fuel, fluid, and number of robots used.

## Spotify-Track (TypeScript)

```
===== 3:49:00 AM =====
~ [REDACTED] is listening to - Lovesick by Trevor Daniel
===== 3:49:20 AM =====
~ [REDACTED] is listening to - Anyone by SEVENTEEN
~ [REDACTED] is listening to - Angel Baby by Troye Sivan
~ [REDACTED] is listening to - 永遠に by Little Glee Monster
===== 3:49:40 AM =====
===== 3:50:00 AM =====
~ [REDACTED] is listening to - Stereo Hearts (feat. Adam Levine) by Gym Class Heroes
~ [REDACTED] is listening to - La thune by Angèle
~ [REDACTED] is listening to - Are You Bored Yet? (feat. Clairo) by Wallows
~ [REDACTED] is listening to - Come to Life by Kanye West
===== 3:50:20 AM =====
~ [REDACTED] is listening to - California Dreamin' - Single Version by The Mamas & The Papas
~ [REDACTED] is listening to - 青花瓷 by Jay Chou
~ [REDACTED] is listening to - Jocelyn Flores by XXXTENTACION
~ [REDACTED] is listening to - Evergreen by softy
~ [REDACTED] is listening to - Catching On (feat. Nevve) - B-Sides Remix by Elephante
===== 3:50:40 AM =====
~ [REDACTED] is listening to - Rumor by Moore Kismet
~ [REDACTED] is listening to - Passionfruit - Stripped Version by Josh Sabueta
```

- Created this quick Node script since Spotify does not officially support an API for friend listening activity.
- Used open-source API wrapper to track and store friend listening histories in MongoDB.