

Daniel Qu

SOFTWARE DEVELOPER

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Education

University of Waterloo - 92% GPA

B.A.Sc. IN HONOURS MECHATRONICS ENGINEERING

Sep 2020 - Present

Waterloo, Canada

- Computer Structures and RTOS, 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

- Deployed Promtail/Loki/Grafana stack using Helm to aggregate and display logs from 100+ Kubernetes pods across dozens of development teams, improving the accessibility of application logs.
- Wrote script to monitor and clean up unused AWS volumes using Python and Jenkins with Slack integration.

PlayStation - Sony Interactive Entertainment

FRONT END SOFTWARE DEVELOPER INTERN

Jan 2022 - Apr 2022

React Native, Redux, Python, Jenkins

- Supported the 2022 PlayStation Plus release by implementing UI features in React Native and Redux.
- Wrote automated Python end-to-end tests for dozens of checkout flows in order to deliver rigorous regression testing for the team.
- Achieved first prize in global hackathon with a team by creating a calendar app for the PS5.

Dreamschools

FULL STACK SOFTWARE DEVELOPER INTERN

May 2021 - Aug 2021

React, Express, PostgreSQL, Stripe

- Addressed slow Stripe API calls by parallelizing/batching requests, improving load times by up to 10x.
- Developed complete messaging system and chat page using React, Twilio and PostgreSQL to provide SMS and email communication between clients.
- Overhauled checkout process by supporting additional payment methods and simplifying checkout UX.
- Took initiative to improve code quality by creating reusable React components such as modals.

Projects

Hexle - [Live Link](#)

[GITHUB](#)

Feb 2022 - Mar 2022

TypeScript, React, CSS

- Created a Wordle variant with a friend in React with returning users from over 40 countries worldwide.
- Refactored React state management and components to improve code quality and readability.

Midnight Sun Driver Dashboard - Solar Car Team

[GITHUB](#)

Apr 2021 - Sep 2021

Flutter, Dart, Python

- Built digital dashboard for Midnight Sun's solar vehicle including speedometer, battery life.
- Performed virtual CAN integration testing by mocking CAN messages to send to the dashboard.
- Effectively used Flutter animations to direct driver attention to appropriate locations on the dashboard.

Skills

Languages

JavaScript/TypeScript, Python, C, C++, Bash, SQL, HTML/CSS

Frameworks

React, Redux, Express.js, Node.js, Flutter

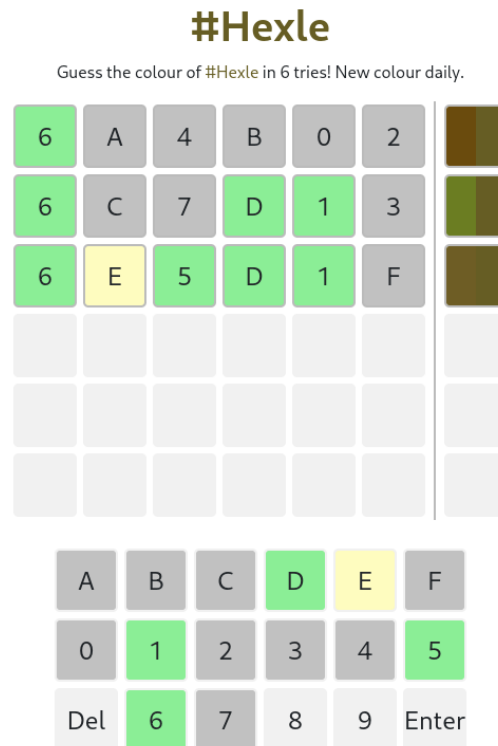
Tools

Git, Linux, AWS (EC2, S3), Jenkins, Docker, Kubernetes, Jira

Portfolio

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

Hexle - Wordle Variant (Typescript, React, CSS)



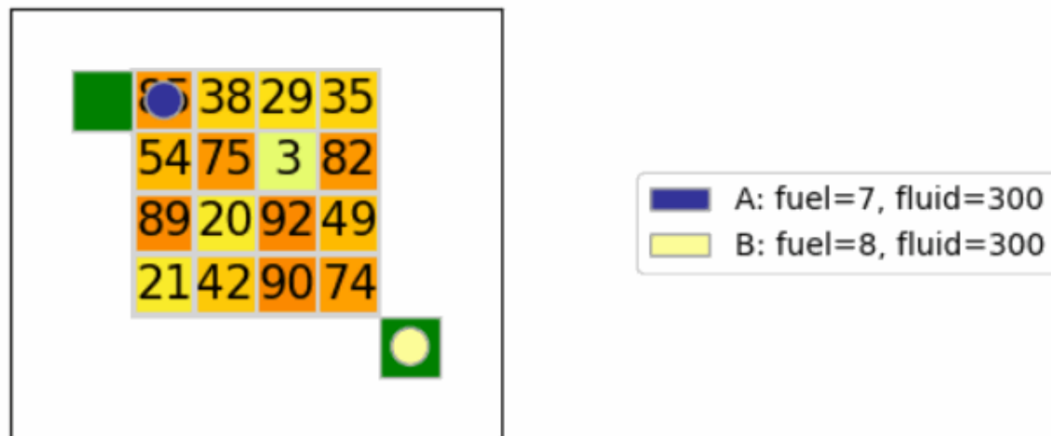
- Try the guessing game out at franklin.github.io/hexle/

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, MongoDB)

```
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 Saburto
```

- Created Node script to track friend listening history into MongoDB since Spotify does not officially support an API for friend listening activity.