Henry Lam

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Website: henrylam.dev

Skills

Languages: Javascript · Python · Java · C · HTML/CSS
Frameworks & IDE: React · Bootstrap · Express · Android Studio
Database & Development Tools: MySQL / PostgreSQL · MongoDB · Git · Node.js · JSON · Firebase

Education

The University of Toronto – St. George

Bachelors of Science, Major in Computer Science - Dean's list of honours - cGPA: 3.73 / 4.0
- Relavent Learnings: Data Structures & Algorithms / Code Design Patterns / Server & Client connections (Sockets)
- 3rd Year Student (Expected Graduation: Dec 2020) - Able to work fulltime even after summer (very few courses left)

Projects

BlackJack & Probability (Full Stack Web Application)   2020

React / Javascript / Node.js / MongoDB / Express / Routers / HTML / CSS   (Personal Project)
- Play BlackJack (card game) as the dealer without choice restrictions, against 3 AI bots with bet values ($)
- Developed an algorithm that analyzes the current state of the game, and forcasts all possible future scenarios that can occur from the current state up to the end of the game, weighing this probability with bet values to determine and advise the player of the best possible move in the current scenario to maximize profits based on probabilities.
- MongoDB as user database, handles API requests, data encryption, page routing
- App: https://probblackjack.herokuapp.com/ | ⬮ Code: https://github.com/Henry-Lam/ProbBlackJack

Online Piano (Web Application)   2019

HTML (Canvas) / CSS / Javascript / React   (Personal Project)
- Keyboard keys plays piano notes. User can select to be guided in playing a song (from a list), whereby letters appear on screen in sequence guiding the user to play the selected song. Key presses initiate piano audio and animations.
- Implemented audio control API, developed collision detection and object velocity calculation algorithms.
- App: https://henry-lam.github.io/OnlinePiano/ | ⬮ Code: https://github.com/Henry-Lam/OnlinePiano

Social QR (Mobile App)   2019

Android Studio / Java / Firebase   (Personal Project)
- Users create an app account, and add their social media information they wish to share, (Ex: Facebook/LinkedIn profile links or Instagram/Snapchat/Discord names etc). Each user account has a uniquely generated QR code. Using app embedded QR reader, users can scan the QR code of other users and instantly exchange all social media information they added to their account.
- Features: Login / Sign up / Friends list / QR Scanner & decoder / QR code Generator / Image cropping
- Demo: https://henrylam.dev/#SocialQR_id | ⬮ Code: https://github.com/Henry-Lam/Social-QR

Parking & Pickup Locator (Mobile App)   2019

Android Studio / Java / SQLite   (Personal Project)
- Parking locator: Use google maps API to allow users to save their current location when parking, and to access that saved location and display it on a map, making it easier to find their vehicle in large parking lots.
- Pickup locator: Generate URL that users can send to friends that opens google maps and display the user's location for pickup.
- Demo: https://henrylam.dev/#Locate_id | ⬮ Code: https://github.com/Henry-Lam/Locate_App