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Sheng Yang

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Summary

Enthusiastic software engineer with extensive knowledge in test-driven development of web / mobile applications and 'can do' attitude looking for entry level opportunity in front-end / full-stack developer role

Technical Skills

Strong - React & Redux, React Native, Node, Git & Github, Unit/Integration/E2E testing, AWS, Docker, JavaScript / ES6, HTML & CSS
Experienced - Angular, Backbone, Exponent, RESTful / APIs, socket.io, MongoDB, MySQL, Heroku, LabView

Software Engineering Projects

MadSweepers, Software Engineer
real-time multiplayer game combining Contra and Minesweepers, utilizing React / Redux as Front-end framework, node / express as back-end framework and socket.io as communication protocol

- Developed React/Redux based client-side game states manager and middleware for handling states updates and concurrent multi user web-socket communications
- Designed the structure of the app for better control on user interaction
    - defining back-end as the game states hub, where the latest game states are calculated after the player's operations are sent to server
    - the front-end received game states updates through socket from server and rerender game views instead of generating new local states directly
- Used object-oriented design to optimize the back-end server, establishing structured classes for gameManager, board and players with comprehensive methods to manage game states
- Redistributed workload of game states calculation to client side to achieve lighter socket traffic and faster game response
- Created socket.io based modules to synchronize changes of game states resulted from real-time user interactions on multiple clients' terminals
- Deployed application services through Docker containers and leveraged AWS ECS clusters and EC2 load balancers to enhance performance
- Implemented unit testing and integration testing by mocha, chai, sinon, enzyme

Jamz, Software Engineer
An IOS app designed to help users to setup and accomplish goals and cultivate accountability

- Built modular and performant user interface with React Native and Exponent
- Utilized Node, Express and MongoDB to construct back-end to store and serve user data, including authentication information, personal goals and check-in history
- Constructed APIs on server side and enabled the communication between front-end and back-end through RESTful requests
- Automatically updated and deployed server, using heroku and CircleCI
- Increased unit and integration test coverage using Mocha, Chai

Meal.Next, Software Engineer
All-in-one IOS app to find recipes, build grocery list, check nutrition info and calories consumption

- Used NativeBase to polish the user interface for rendering native IOS app views
- Integrated local storage to persist user profile information and preferences between sessions
- Enabled seamless transitions between Front-end views with Exponent navigation bar
- Employed various React-Native components to implement interactive and visual user features, including drawer, swipeout, keyboardAvoidingView, search bar, loading spinner and chart

Professional Experience

International Technological University, Bio-Electrical Engineer 2012-2016

- Conducted research on wearable device technology, non-invasive glucose sensing and calories expenditure calculation
- Implemented auto-testing of photodiodes and data extraction by enabling the communication between parameter analyzer HP4145 and PC using LabView programming
- Utilized NI vision development module and LabView programming to measure the droplets moving speed by analyzing the experiment
- Published numerous papers on IEEE and SPIE conferences, including:
  - ★ “Algorithm to calculate human calorie expenditure based on a predicted heat strain model”, Sheng Yang, Yen-Chun Yeh, John Ladasky and Dominik Schmidt, IEEE-EMBS BHI 2016, Las Vegas
  - ★ “Single chip AWG-based Raman spectroscopy for continuous glucose monitoring”, Sheng Yang, Yen-Chun Yeh, John Ladasky, Avid Farhoodfar and Dominik Schmidt, SPIE BioS 2016, San Francisco

Education

Hack Reactor, *Advanced Software Engineering Immersive Program* 2016

Fudan University, *M.S in MicroElectronics* 2008 - 2011

Fudan University, *B.S in MicroElectronics* 2004 - 2008

- Top 3 student in Masters program (3.80/4.0). Awarded with People’s Scholarship six times
- Relevant courses: Computer Architecture, Principle of Microcontroller, Digital Logic