JARVIS ZHAOWEI WU

Software Engineering

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SKILLS PROFILE

- Well-versed in Cocoa (iOS/watchOS) application development through previous work experience and self-learning.
- Languages I use: Swift, Python, JavaScript, HTML/CSS, C, C++; I am also familiar with: Java, Kotlin, Objective-C, and SQL.
- Tools I use: Xcode, Eclipse, Android Studio, Git, TFS, Firebase, Gradle, Postman, Dialogflow, Metabase, InVision, Sketch, etc.
- Libraries/frameworks I use: SciPy, Matplotlib, TensorFlow, Turi Create, Metal, OpenCV, Mapbox, Vue.js, Socket.IO, Realm, etc.
- In spare time, I am studying: computational photography, NLP (BERT, fastText, Watson), and graphic design (Illustrator).

WORK EXPERIENCE

TD Lab Software Developer   Kitchener, ON, Canada • Sept – Dec 2018

- Added face tracking to an iOS photo booth app and reduced 40x GPU-induced energy impact by optimizing animations.
- Re-implemented a machine learning project that converts sketches on paper to real mobile apps using Turi Create (YOLO).
- Achieved better performance (~70% mAP@.5) by preprocessing dataset with OpenCV (Gaussian Thresholding) and Imgaug.
- Continuing improving the open-sourced sketch2app project by applying camera perspective calibration on input data.
- Created a chat bot with Slack/Messenger integration that uses Dialogflow to answer questions about banking products.
- Designed an app that retrieves and tracks subscriptions from transaction API and recommend related products to users.

LCBO|Next Mobile Developer   Kitchener, ON, Canada • Jan - Apr 2018

- Implemented an Inter-Store Transfer MVP backed by Firebase Auth, Realtime Database, and LCBO General APIs.
- Worked on admin/client apps of a Digital ID project that verifies customer photos using encrypted QR code for fast check-in.
- Created an app for submitting digitized tasting notes to PostgreSQL and feed an Azure blob storage with product images.
- Designed a watchOS prototype that updates in-store statistics for staff in real-time notifications via WatchConnectivity.
- Enhanced the security level and/or user experience of multiple projects using JSON Web Token (JWT), Auth0, Instabug, etc.

Rave Inc iOS Developer   Kitchener, ON, Canada • May - Aug 2017

- Collaborated on a new version that introduces RaveDJ (first AI-powered DJ in the world) and Netflix playback to the app.
- Built the frontend UI and backend logics of the login/sign-up, Spotlight, and Continue Watching sections for Rave Netflix.
- Customized a side menu that enables Netflix user profile switching, and the navigation through hierarchical video genres.

SIDE PROJECTS

Koncensus An award-winning tool to get unbiased public opinions about movies   Dec 2018

- Hosted a Flask server to scrape Tweets and used Microsoft Azure Text Analytics to generate normalized sentiment scores.
- Implemented an iOS client app that can get movie info from OMDb and display computed score and relevant tweets.
- Currently planning to extend the app with *last.fm* and *Open Library* APIs to support search queries for music and books.

Hikari Better and easier mobile photography powered by ML   Jan 2019 - Present

- Building a Generative Adversarial Network to imitate photo effects based on selected styles like cyberpunk, Polaroid, etc.
- Working on a kNN-based recommender that analyzes and interprets the subjects of photos and recommends relevant filters.
- Designed the UI, graphic assets and the UX prototype for mobile apps using Sketch, Adobe Illustrator, InVision and Zeplin.
- Currently leading the product marketing research and the development of native iOS and Android applications.

EDUCATION

University of Waterloo   Waterloo, ON, Canada • Sept 2016 - Present

- Candidate for the Bachelor of Software Engineering (BSE). Currently in 3A term and expected to graduate by Spring, 2021.