

Paul D’Pong

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SKILLS

Languages: C++, C, Kotlin, Java, JavaScript, Dart, C#

Frameworks/Tools: Android SDK, React, React-Native, Flutter, d3, Firebase, Docker, MySQL, MongoDB, Retrofit, Dagger, Node.js, Express, GTK, Git, Gerrit

WORK EXPERIENCE

Red Hat, Open Source Software Engineering Intern – C, Java, GTK May 2020 – August 2021

- Maintained the Eclipse Platform Standard Widget Toolkit (SWT) framework for GTK3 by conducting patch reviews, contributing bug fixes, and triaging bugs
- Planned and monitored the upgrading of SWT to GTK4
- Contributed to SWT GTK4 upgrades by porting functionality of UI widgets, bridging C functions to Java with JNI, and creating automated test snippets
- Overhauled Hi-DPI functionality, eliminating instances where Eclipse was unusable at high resolutions
- Improved TreeItem insertion and deletion performance by ~50% through reimplementation of cell rendering information
- Implemented a system to allow for widget-based menus to work fluidly with model-based menus

Usha, Contract Android Developer – Dart, Flutter, Firebase November 2020 – June 2021

- Led a team of 2 developers to create the app through to the release, including designing front/back-end architecture, environment setup, and writing future development plans

Dot Health, Software Developer Intern – Kotlin, React-Native, JavaScript May 2019 – August 2019
June 2018 – August 2018

- Successfully co-led the porting of the React-Native app to a native MVVM-based Android app
- Implemented an efficient RecyclerView which supports custom Bezier curve and multiple view types
- Developed network layer for authentication and backend API interface using Retrofit
- Created a generalized health record form system, increasing efficiency by 70% when implementing new record types
- Built word highlighting and definition modals for health record observation headers
- Worked closely with designers to determine optimal designs within software constraints

PROJECTS

BulletTime, 2D 1v1 bullet-hell game – C++, Ubisoft HackerNest API January 2021

- Implemented an event recording system to allow for a clone mechanism where previous player actions are replayed in upcoming rounds

Grash, Incentivized Personal Investment App – Kotlin, Microsoft Azure September 2019

- An Android app which allows users to contribute their environmental savings from grocery store purchases to investment accounts
- Won the HackTheNorth 2019 TD Da Vinci API challenge
- Analyzed user receipts using Microsoft Azure to reward green & reusable product purchases
- Designed a user interface to summarize environmental savings and present investment opportunities

CityMapper, OpenStreetMap Visualization Program – C++, GTK January 2019 – April 2019

- Created a Google Maps clone to visualize OpenStreetMap data
- Implemented Dijkstra's path finding algorithm, with A* heuristic, and TSP greedy algorithm with 2-opt swap to find optimal weight-constrained courier path
- Interfaced with Toronto's OpenData API for live transit information using libcurl

EDUCATION

University of Toronto, St. George Campus 2017 – 2022

B.A.Sc. in Computer Engineering – GPA 3.81/4.0, Dean's Honour List

TA Experience: ECE244 Programming Fundamentals C++ (Fall 2021)