YOAV ARBIV

yoav.arbiv@gmail.com | yoavarbiv.com | yarbiv | yarbiv | 416-666-1841

+ EXPERIENCE

A Thinking Ape | Software Engineer

Jan. 2020 - Apr. 2020

• Re-architected and rewrote WebSocket implementation across backend and mobile apps, improving response time and decreasing API load by ~66%
• Leveraged BigQuery for automated reporting on game health, computing and storing relevant metrics
• Profiled and load-tested endpoints using Locust to diagnose performance issues, optimizing by >100ms
• Automated in-game seasonal store scheduling, greatly reducing designer overhead
• Designed and implemented views across iOS and Android

D2L | Software Developer

May 2019 - Aug. 2019

• Implemented a custom NLP question generation algorithm with a yield rate of 95% applicable questions
• Created an integrated notetaking app in React-Redux
• Designed a RESTful API with Express to serve and cache course materials and user-generated content
• Implemented microservice pattern in API design to increase endpoint response time by >100%
• Managed database redesign to write cleaner CRUD operations and increase query speed by ~25%

North | Software Engineer

Sept. 2018 – Dec. 2018

• Developed phone-to-glasses communication protocol
• Resolved an issue in the glasses rendering pipeline, increasing frame refresh rate by >90%
• Implemented IPC and data serialization built on low-level Android libraries
• Designed prototype smartglasses apps
• Built infrastructure using Cookiecutter to rapidly kickstart new prototype projects
• Created predictive machine learning models from experimental image and audio data

+ TECHNOLOGIES

Languages

C, C++, Verilog, Python, JavaScript, Java, Asm

Frameworks/Libraries

React, Redux, Node.js, Express, MongoDB, SQL, Flask, SpaCy, NLTK, Qt, Android NDK

Tools

Git, ModelSim, Vivado, Docker, Bash, CMake

+ PROJECTS

XY Controller | C, Diptrace

• 2D controller with stepper motors which visits a series of coordinates and visualizes progress on LCD
• Designed PCB shield for a microcontroller, mapping GPIOs to multiplexers to control components
• Wrote embedded-level state machine to drive motors, check sensors, and poll a keypad

MusicalAnalysis | Python, React

• Analyzes lyrical models to visualize sentiment, lexical diversity, and vocabulary depth
• Determines musical emotion (sadness, anger, happiness) from quantitative audio features
• Preprocesses lyrics, removing stopwords, punctuation, etc. with natural language processing

+ EDUCATION

University of Waterloo | 3.9 GPA

Expected 2022

• BASc, Honours Computer Engineering
• Relevant courses: Computer Architecture (ECE 320), Digital Hardware Systems (ECE 327), Embedded Microprocessor Systems (ECE 224)