HARMAN BRAR

Year 2 | Computer Science

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EXPERIENCE

UBC Sailbot, University of British Columbia— *Software Engineer*

September 2018 - Present

- Developing a web application using **Node.js/Express & React** that will receive, store, and display data produced by an autonomous sailboat, as well as push waypoint and speed commands to the sailboat

Momose Laboratory (Physical Chemistry), University of British Columbia — *Undergraduate Research Assistant*

May 2018 - September 2018

- Wrote **Igor** scripts to automate quantification of data from various programs, such as **SIMION**, taking seconds instead of hours
- Designed ion optics configuration to optimize detection of ammonia molecules in a microwave trap cavity
- Studied and began work on adapting an evolutionary algorithm in **C++** to local Zeeman Decelerator configuration to increase phase space density by up to 40%
- Delivered biweekly* presentation on progress and task forecast

GS Software Development, Surrey BC — *Software Development Intern*

June 2018 - August 2018

- Developed an Android/iOS parent-school staff communication application, that also displays student grades and attendance, using **React Native**
- Participated in weekly meetings to discuss design, functionality, and progress

Turfco Landscape Supply Inc., Richmond BC — *Technology Manager*

May 2017 - April 2018

- Solely built the company's web presence, inventory tracking, invoice, and account management systems using **HTML/CSS/JavaScript** and **Java**

BipTech, Vancouver BC —Volunteer Android Developer

December 2016 - May 2017

- Developed InnovateBC application for BC Ministry of Education using **Android SDK**

EXTRACURRICULARS

UBC Table Tennis Club
- February 2019 to Present

Surrey Knights Junior Hockey (PJHL)
- September 2016 to March 2017

Co-President - Burnaby South Programming Club
- September 2016 to June 2017

Affiliated Player - Langley Knights (PJHL)
- October 2015 to March 2016

BWC Midget AAA Hockey
- August 2015 to March 2016

Stride Avenue Neighbourhood Daycare
- March 2015 to August 2015

SPOKEN LANGUAGES

English

Punjabi

Hindi

Urdu

- Built ScrollView of all projects on the platform and associated functionality

PUBLISHED INDIVIDUAL PROJECTS

Alfred - Android Assistant (Android) ~ April, 2018 ~ Link
- Virtual assistant built for android devices.

PaddleBall (Android) ~ December, 2017 ~ Link
- Minimal Brick-Breaker spin off game built for android devices.

TastyBox Foods ~ May, 2019 ~ https://www.tastyboxfoods.com/
- Website developed for local food service company.

NETBOOKLET ~ January, 2019 ~ https://www.netbooklet.com/
- An online catalogue of products from across the web.

Punjabi Keyboard ~ May, 2016 ~ www.punjabikeyboard.co.nf
- Tap-to-type online Punjabi keyboard. Developed when there were not many keyboard options for the Punjabi community.

HACKATHONS

NWHacks 2019

- Developed an entertainment finder application that returned something to do nearby when given a location using **Node.js/Express**
- Focused on building and connecting an API to deliver data to the frontend
- See https://github.com/harman-brar/NWHACKS2019-Backend

MLH UBC Local Hack Day 2018

- Built a tool to improve accessibility of Slack for dyslexic individuals using the **Slack API** and **Node.js** on **Glitch**
- Offers on demand conversion of slack messages and text-on-images to dyslexic friendly font
- See https://github.com/harman-brar/Slack-Dyslexia-Tool

EDUCATION

University of British Columbia Vancouver — *B.Sc. Computer Science, Year 2*

September 2017 - May 2021

Relevant Coursework: Program Design, Data Structures, Algorithms, Multivariable Calculus, Linear Algebra, Symbolic Logic, Discrete Mathematics, Elementary Statistics, Astronomy