

# HARMAN BRAR

Year 2 | Computer Science

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Github: [harman-brar](https://github.com/harman-brar)

Stack Overflow: [hb22](https://stackoverflow.com/users/10222222/hb22)

Web: [harman-brar.github.io](https://harman-brar.github.io)

## 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 — *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 — *Technologies 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.

**NETBOOKLET** ~ January, 2019 ~ <https://www.netbooklet.com/>

- An online catalogue of products from across the web.

**Punjabi Keyboard** ~ May, 2016 ~ [www.punjabikeyboard.co.nf](http://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