



www.rajmahey.com

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TECHNICAL SKILLS

Languages

- Experienced with: C, C++, HTML, CSS
- Some experience with: Batch Scripts, Java, JavaScript, Matlab, PHP, Python, REST, Ruby (on Rails), C#, XML
- Learning: Assembly, Node.js, SQL

Software & Technologies

- Android Studio, Agile, Cloud9, Git/SVN, Unity3D, Oculus, Arduino, Shell, CMD
- Learning: AngularJS, OpenGL

Operating Systems

- Windows, Linux (Ubuntu), Mac OS

PERSONAL PROJECTS

Open Source Contributions

Present

- Contribute to GitHub Atom C/C++ and Assembly languages, modifying code to increase usability

Test Making Web App

Aug 2016 – Present

- Allows educators to automate exam/test building for their courses, decreasing preparation time
- Currently in design phase, utilizing Agile/Scrum in team of four to increase productivity
- Plan to release to Simon Fraser University as a module in the instructor's web interface, as well as an API, allowing for consistent and controlled UX (Ruby on Rails, SQL, HTML, CSS)

SFUMunch

Apr 2016 – Present

- Selects a random restaurant to eat at near SFU, saving colleagues up to 10 minutes per day
- Includes location filters and presents restaurant menus, allowing variety for different users
- Learned Android development in Android Studio, Java classes, file I/O and test scripting
- Studied Android material design, learning to publish apps following Google style guidelines
- Gained experience developing good UX / UI (Java, XML) www.rajmahey.com/munch.html

Shards of Stan

Feb – Jun 2011

- Lead programmer in developing a multi-level prototype of a role playing game in a team of 3
- Implemented sprite based animation, tile based map generation and basic A.I. enemies using Pygame library (Python, PhotoShop)
- Ported to Android in May 2016 to gain mobile game development experience (Java, XML)

HACKATHON PROJECTS

PartyPong

Sep 2016

- Built in team of 4, gaining Honorable Mention at Canada's largest hackathon: HackTheNorth
- Utilizes Oculus Rift to show that games such as ping pong can be played in small areas using VR
- Learned Arduino programming, utilizing gyroscope and accelerometer data to control the virtual ping pong paddle, allowing for realistic user experience (Unity3D, Oculus VR, Arduino, C#, JS)

FireBot

Jul 2016 – Present

- Built in team of 5; first prize winner at TM Forum {open}:hack hackathon
- Uses IBM Watson to intelligently respond to and learn from emergency text messages regarding wildfires, increasing data collection speed relative to traditional methods
- Utilized Google Maps API to post location data gathered via cell triangulation, improving user experience and decreasing emergency response time
- Designed full front end and programmed large scale back end REST methods (NodeRed, jQuery, JS, HTML, CSS, IBM Bluemix, Watson, REST) www.rajmahey.com/firebot.html

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ACADEMIC PROJECTS

English/Klingon Translator

May – Aug 2016

CMPT 225: Data Structures and Programming, Simon Fraser University

- Designed and implemented an English to Klingon translator, increasing competency in choosing correct algorithms and data structures
- Utilized AVL tree for $\Theta(n)$ alphabetical dictionary printing and hash table with chained hashing for $O(1)$ lookup, allowing for best possible runtime (C++)

PNG Manipulation Library

Sep – Dec 2015

CMPT 127: Computing Science and Programming II, Simon Fraser University

- Used knowledge of matrix manipulation to implement a low level, command line PNG editor
- Wrote optimized scaling, inverting, copying, color searching and merging functions (C, Xlib)

OTHER WORK & VOLUNTEER EXPERIENCE

Co-Founder and Chief Operations Officer

Sep 2015 – Sep 2016

SFU Fishing Society, Burnaby, BC

- Managed operations, including strategizing and planning events, finances and workshops; leading to greater student collaboration and community
- Performed shoreline cleanups, engaging with the public and ensuring park shorelines were well taken care of, helping with environmental preservation

Fishing Consultant, Menswear Associate

Jul 2014 – Jul 2016

Army & Navy Dept. Stores, New Westminster, BC

- Employed my expertise of fishing BC to assist new and experienced anglers catch more fish
- Contributed to numerous menswear floor plan changes, expanding sales by allowing customers to more efficiently find relevant items

Product Expert, Samsung Experience Consultant

Jan 2010 – Jan 2014

Future Shop, Coquitlam, BC

- Assisted customers in choosing the best product based on their needs, building customer loyalty
- Engineered a universal infrared remote control which turned on/off all televisions in range with a single click, saving employees up to 20 minutes per day
- Held live, interactive demos to engage customers, increasing sales of Samsung products

EDUCATION

Simon Fraser University, Burnaby, BC

Sep 2014 – Present

- Anticipate graduation in June 2019 with BSc in Computer Science & Minor in Math

AWARDS

Football championships

- Strong team player, winning Vancouver Mainland title and BC high school championships

SKILLS, ATTRIBUTES & INTERESTS

- Able to communicate in English, Punjabi and Hindi
- Self-taught cellist, pianist and guitarist
- Interested in web design, UI & UX
- Experienced with building computers
- Enjoys sustainable fishing and hiking
- Plays ice hockey and football
- Foosball legend