Raphael Koh

Mathematical Physicist | Software Developer

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SKILLS

Languages
Java, Python, JavaScript (ES6+), HTML, CSS, C++, C, Scheme

Frameworks/Tools
Node.js, Express.js, d3.js, Socket.IO, NumPy, Matplotlib, Spring Boot

Technologies
Android Studio, LaTeX, Jira, Git, Bash, Firebase, Now, Heroku, MongoDB

PROJECTS

WatsMyMajor — *HTML, CSS, JavaScript, Node.js, Express.js, d3.js, Heroku* ⌨
Created a web app that interacts with the **UWaterloo API** to assist students in determining their major/minor and planning their courses. Worked individually on the entire project from inception to production.

Teambot — *Node.js, Express.js, Firebase, Slack API, Now* ⌨
Designed and prototyped a **chat bot** that connects hackathon participants to prospective teammates using the **Slack API**. Integrated Teambot with the Hack the North 2017 slack and served over 800 participants.

PicFive — *HTML, CSS, JavaScript, Node.js, Express.js, JQuery, Clarifai API, MongoDB, Heroku* ⌨
Designed a web-based game built at UofTHacks IV that utilizes **machine learning** and **computer vision** via the **Clarifai API** to classify images uploaded by players. Worked on the integration of the Clarifai API and its datasets.

EXPERIENCE

Loblaw Digital, Loblaw Companies Limited — *Software Developer Intern* AUGUST 2017 – PRESENT
- Developed software for Loblaw's online grocery store alongside full-time developers in a Scrum Agile workflow.
- Worked primarily on the backend to design and manage the API interfaces using **Java Spring Boot** and **Hybris**.

Hack the North, University of Waterloo — *Community Manager* FEBRUARY 2017 – PRESENT
- Spearheaded new community initiative by working with tech companies like Shopify and Top Hat to organize workshops and talks with turnouts of over 50 students.
- Part of the organizing team for Canada's biggest hackathon with guest speakers such as Justin Trudeau and Balaji Srinivasan, and over 1,000 participants from all around the world.

Waterloop, University of Waterloo — *EM Systems Team Member* OCTOBER 2016 – JUNE 2017
- Assisted with design of the magnetic braking system for pod and conducted tests to optimize the efficiency of the brakes.
- Worked with mathematical modelling software, such as **NumPy** and **Matplotlib**, to plot data and predict test results.

MathSoc, University of Waterloo — *First Year Representative* OCTOBER 2016 – APRIL 2017
- Worked extensively with first year students in the Faculty of Mathematics to represent them on MathSoc Council.
- Organized three events geared towards helping first year students relax, adjust to campus life, and network with upper years to get insight on academic and career opportunities. Had massive turnouts of almost 150 students.

Singapore Armed Forces, Singapore — *Platoon Sergeant* FEBRUARY 2014 – MARCH 2016
- Trained a company of 264 recruits, by imparting soldier fundamentals, military knowledge, and instilling discipline.
- Planned the company's training schedule and organized military exercises.

EDUCATION

University of Waterloo, Waterloo, ON — *Bachelor of Computer Science, Honours, Co-op, 3A* SEPTEMBER 2016 – APRIL 2021
Cumulative Average: 90.2%, Term Dean's Honours List