# Rohan Gupta

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## Education

**University of Waterloo**
B.A.Sc in Computer Engineering
Projected April 2021

## Knowledge

**Languages:** Java, C++, JavaScript, HTML, CSS, Python, Swift, C, MATLAB
**Tools:** Git, Jira, Jenkins, Docker, Kubernetes, Prometheus, Grafana, Apache
**Databases/Frameworks:** MongoDB, MySQL, React.js, Node.js, Knockout.js

## Experience

**Amazon**    *Vancouver, BC, Canada*
Software Development Engineer Intern    *September 2020 – Present*
- Helping the AWS Observability team with 2 new services based on existing open source projects to be revealed at re:Invent 2020.
- Working on a project that will simplify customer on-boarding by distributing AWS proxy within a Kubernetes cluster, using Go.

**NVIDIA**    *Santa Clara, CA, U.S.A*
Systems Software Intern    *January 2020 – April 2020*
- Worked on multiple display-related features for the next generation Tegra SoCs using C, C++, and Bash.
- Led design and implementation of 3 features; adding support for rotations/reflections, adding ability to allocate semaphore/notifier surfaces in system memory, and allocating custom designs on block linear surfaces with differing block heights.
- For features, iterated on the design with the team, implemented the API, added hardware support, and wrote unit tests.
- Completed the entire bring-up of kernel-level display driver in pre-silicon environment by debugging and fixing all issues that arose.

**Adobe**    *San Jose, CA, U.S.A*
Software Engineering Intern    *May 2019 – August 2019*
- Worked on the UI and back-end for Pipeline – an Apache Kafka-based, mission-critical messaging bus for asynchronous communication across Adobe solutions. Processes tens of billions of messages a day replicated in 13 different data centers.
- Developed front-end using React.js and back-end using Node.js, MongoDB, and Java.
- Improved Pipeline by adding multiple functionalities such as displaying events like CMRs and CSOs, surfacing on-boarding requests for Kafka topic creation on UI, and alerting for consumer group lag with Slack/PagerDuty integration.
- Saved approximately 4 hours of weekly developer on-call support time with successful implementation of features.

**Ford Motor Company**    *Oakville, ON, Canada*
Software Infrastructure    *September 2018 – December 2018*
- Created features for Application Lifecycle Management (ALM) and Inter-Process Communication (IPC) components using C++ in a Linux and QNX environment using libraries like Gcov and Protocol Buffers, and tools like Git and SonarQube.
- Increased unit test coverage by 30% and decreased bugs/code smells by 90% in the ALM and IPC components.

**Cineplex Entertainment**    *Toronto, ON, Canada*
Application Software Developer    *January 2018 – April 2018*
- Worked in a team of 4 developers on 2 production-ready mobile applications for the Cineplex Store.
- Programmed UI/UX features using Swift on Xcode for iOS application and Java on Android Studio for Android application.
- Added continuous integration (CI) to apps for running tests and automating builds simultaneously.
- Worked closely with a back-end developer to design and refine RESTful APIs for the entire development team.

**Cineplex Entertainment**    *Toronto, ON, Canada*
Software Developer    *May 2017 – August 2017*
- Redesigned front-end of the Cineplex Store e-commerce website using HTML, CSS, Sass, and JavaScript.
- Increased store revenue and web traffic with redesign, attracting approximately 30000 unique visitors per month.
- Initially recruited as a Quality Assurance Analyst, promoted to Software Developer after 3 weeks of work.

## Projects

**Surgeon's Helping Hand**    *C++, Java*
Won Best Healthcare Hack at DeltaHacks. Created a robotic hand that mimics hand gestures recorded by Leap Motion sensor. Leap Motion API sent data to the web and then to an Arduino, which controlled servo motors connected to each finger.

**Humit**    *Java, JavaScript*
Developed a windows application at HackTheNorth. Cortana was used to recognize a hummed tune. Fast Fourier Transform converted the hummed tune's frequencies into musical notes, which were then compared to actual song's music notes.

**Gesture-Controlled 2048**    *Java*
Android application made in Android Studio that refined raw sensors on cellphones to recognize hand gestures and create a virtual object that reacted to gestures using pseudo physics and animations.

**Hackers Against Dumb Posts**    *Java, Python*
Social media assistant built at HackTheNorth that uses an Android keyboard, computer vision, and sentiment analysis to advise individuals before posting controversial content on their public social platforms.