

# Sarim Zafar

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## Skills

- Java, Python, Ruby, Go, C++, JavaScript
- Spring, Rails, NodeJS, MySQL, Google Cloud Platform, Elastic Search
- Strong experience working with Agile methodologies, TDD and tools Git, Bitbucket, JIRA

## Professional Experience

**Ritual** — Software Engineer L4 - *Toronto*

Jan 2020 - Present

- Lead effort to add *Similar to merchant* search on Ritual and raise order conversion by **3%**
- Lead effort to add *Apple Sign In* on Ritual allowing users to sign privately and boost sign up rates
- Took over the duties of Project manager including design review, managing tasks on JIRA and releasing test plans

**Ritual** — Software Engineer L3 - *Toronto*

Dec 2018 - Jan 2020

- Performed a major overhaul of the payment system to meet [SCA](#) guidelines and enable Ritual to be launched in Europe
- Developed a **Java/Spring** application to help Ops monitor incoming orders and resolve customer issues promptly
- Refactored legacy code and massively increased test coverage through unit and integration tests

**IBM Cloud Garage** — Software Developer - *Toronto*

July 2018 - Nov 2018

- Developed an AI prototype that performs real-word tasks such as ordering coffee over phone using Watson and NodeJS

**Uber** — Software Engineering Intern - *San Francisco*

Summer 2017

- Developed a **Go/RPC** based microservice to automatically name arbitrary [geographic clusters](#) around the world

## Projects

[Q](#) **Foosfighter** – *Python, C++, OpenCV*

- Built an automated foosball table capable of training human players by substituting as a competitive opponent
- Developed the vision component to track and predict ball movement using OpenCV at real-time speeds
- Wrote a custom thread-safe queue to allow for concurrent frame IO and processing to minimize initial lag by **70%**

[Q](#) **Autonomous Robotics** – *C++, ROS*

- Implemented localization, path planning and path following for a [Turtlebot](#) using C++ in ROS
- Localized the robot Particle-filter and executed path movement using a PI controller
- Planned robot path using Probabilistic Roadmap algorithm and computed shortest path via Dijkstra

[Q](#) **Digital Pathology Classification** – *Python, Sklearn*

- Classified pathological images using histogram based descriptor to extract features and train using a meta-classifier
- Achieved **92.85%** classification accuracy on the test data and ranked 12th on the [Kaggle leaderboard](#)

## Research

Research Material

- [RG](#) Sharma, Zafar, Tizhoosh, Babaie 2018. *Facial Recognition using Encoded Local Projections*
- [RG](#) Soleiman, Zafar 2017. *Moving Object detection using Background Subtraction*

## Education

**University of Waterloo** - Bachelor of Applied Science in Mechatronics Engineering

Completed May 2018

- Graduated with *Distinction* and a minor in Cognitive Science

GPA 3.84