Suraj Gupta

 www.surajg.com / suraj.gupta@uwaterloo.ca / szgupta / szgupta

EXPERIENCE

Snowflake San Mateo, CA (Remote)
Software Engineer Intern *August 2021 – Present*
- ○ Working on <u>FoundationDB</u> - a distributed, transactional key-value store that powers Snowflake's metadata
- ○ Improved and <u>simplified the logic for recruiting singletons</u> within a cluster, paving the way for new singleton roles

Wish San Francisco, CA (Remote)
Software Engineer Intern *Jan 2021 – April 2021*
- ○ Engineered full-stack features for an in-house microservice management tool using Flask, React and DynamoDB
- ○ Integrated with K8s, ECR and internal pipelines to **ensure uniqueness across microservices in real-time**
- ○ Architected numerous features for CI pipeline jobs that are used by services across the entire organization
- ○ Identified and **patched a major security vulnerability** associated to compromised API tokens

University of Waterloo Waterloo, ON (Remote)
Research Assistant *Sept 2020 – Dec 2020*
- ○ Advisor: <u>Professor Florian Kerschbaum</u>, Research Group: <u>CrySP</u>
- ○ Researched and <u>implemented</u> novel techniques to efficiently perform equi-joins over encrypted data

OpsLevel Toronto, ON (Remote)
Software Engineer Intern *May 2020 – Aug 2020*
- ○ Built essential features of the repositories integration, including <u>ownership</u> and <u>configuration-as-code</u>
- ○ Created <u>SemVer checks</u> to help service owners control library versions and ensure they are up-to-date
- ○ **Reduced GraphQL query response times by more than 50%** by eliminating N+1 query problems
- ○ Introduced detailed Datadog metrics for the GraphQL API to attain observability per field with arbitrary nesting

OpsLevel Toronto, ON
Software Engineer Intern *Sept 2019 – Dec 2019*
- ○ Implemented numerous full-stack features for the primary web app using Ruby on Rails, Vue.js/Vuex and MySQL
- ○ Significantly contributed to the migration from an internal RESTful API to a <u>public GraphQL API</u>
- ○ Built an efficient and sophisticated search feature on top of MySQL, with an **avg. query time of < 0.2s**
- ○ Researched and <u>implemented SSO via SAML</u> to streamline user authentication

Gluskin Sheff Toronto, ON
Software Engineer Intern *Jan 2019 – April 2019*
- ○ Created a C# desktop app that reveals the daily top/bottom performers for **more than 15K FI securities**
- ○ Designed a SQL Server database to efficiently manage performer calculations for historical analysis

PureFacts Toronto, ON
Junior Developer *May 2018 – Aug 2018*
- ○ Reduced manual test times **from 90 minutes down to 10 minutes** by creating new SQL stored procedures

RESEARCH PUBLICATIONS

**Equi-Joins Over Encrypted Data for Series of Queries **

Authors: Masoumeh Shafieinejad, **Suraj Gupta**, Jin Yang Liu, Koray Karabina, Florian Kerschbaum

EDUCATION

University of Waterloo Waterloo, ON
Bachelor of Computer Science; CGPA: 90/100 *Sept 2017 – April 2022 (Expected)*
- ○ Coursework: Distributed Computing, Concurrency, Databases, Cryptography, OS, Algorithms, Graph Theory

SKILLS

Languages & Frameworks: C/C++, Python, SQL, Ruby on Rails, JavaScript (React, Vue), Scala, Java, C#
Technologies: GraphQL, NoSQL, Redis, Sidekiq, Spark, Hadoop, Datadog, Docker, K8s, AWS, GitLab CI/CD