

# Saksham Sachdev

3B Software Engineering

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## Skills

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**Languages** Java, Python, JavaScript, Go, SQL, C#, C/C++  
**Tools & Frameworks** PostgreSQL, Node.js, Hadoop, AWS, Ansible, Bash, Vim, Vagrant, Protobuf, Git

## Experience

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**Google**, Site Reliability Engineering Cambridge, MA, May-Aug. 2017  
Systems Modelling and Actuation Team

Go, Protocol Buffers, Python, Bazel, gRPC

- Implemented features in a growing deployment configuration framework affecting **500,000 build targets across 3,500 Google services**
- Created a **rollout infrastructure** to safely push new changes to a core build pipeline
- Redesigned a core **protocol buffer merging algorithm** removing 1000+ lines of code

**Hubdoc**, Software Developer Toronto, Canada, Aug-Dec. 2016

Node.js, Elasticsearch, Hadoop, AWS, FluentD, Vagrant, Ansible, PhantomJS

- Designed and implemented a **highly available logging infrastructure** and consolidated user interaction data to improve UX
- **Automated deployment** for an Elasticsearch cluster and MongoDB replica set using Ansible
- Prototyped a **data pipeline** using Hadoop (HDFS) to efficiently archive old log data

**Toast**, Software Engineering Intern Boston, MA, Jan-Apr 2016

Java, Play Framework, PostgreSQL, JavaScript (AngularJS)

- Built a public geolocation API and **optimized underlying SQL queries** decreasing endpoint response time by **over 50%**

**Radialpoint**, Web Application Developer Montreal, Canada, May-Aug 2015

Django Web Framework, JavaScript, jQuery, Bash

- Implemented a user **authentication and authorization API** in Python for **single sign-on** resulting in a more consistent user experience

## Research

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**Graphflow - Data Systems Group, University of Waterloo**

- Building a Cypher-compliant **in-memory graph database** that supports long-running queries with Prof. Semih Salihoglu. Graphflow is fully open source and was presented at SIGMOD 2017.

## Projects

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**Axis**

Node.js, Express, paper.js, HTML, CSS

- Created a stick figure animator that can automatically interpolate between keyframes, **winning first place** at EngHack Waterloo
- Devised the mathematical model for the core underlying linear interpolation algorithm

**Felice**

Node.js, Express, MongoDB, d3.js, Spotify API, Echonest API, Backbone.js

- Developed several genre **data visualizations** for clients' music libraries used by **800+ users** to date by writing data manipulation algorithms

## Education

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**University of Waterloo** Bachelor of **Software Engineering 2014-19**, Class Academic Rep since 2014  
**Courses** Concurrency, AI, Databases, OS, OOP, Compilers, Algorithms, Graph Theory