# Krishna Vaidyanathan

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## Current Position

Software Developer at Oracle NetSuite.

## Education

**University of Waterloo**, Waterloo, Canada Sep 2015 – Aug 2017
*M.Math (Thesis), Computer Science*

**PSG College of Technology**, Coimbatore, India Jun 2010 – May 2015
*Integrated M.Sc, Theoretical Computer Science*

## Industry Experience

**Software Developer** - Oracle NetSuite, Toronto Nov 2018 – current

- Developing in Java+Kotlin/Oracle SQL for the domain of warehouse management.
- Involved in all aspects of agile software development.

**Full Stack Developer** - Coinsquare Mining, Toronto May 2018 – Aug 2018

- Developed from scratch and managed an app (backend: Django; frontend: React) to buy and monitor orders, using Celery, on `NiceHash`; this lead to increased profitability.
- Added merged-mining support to the open source library `node-merged-pooler`; this lead to a potential increase in profits at no additional cost.

**Backend Engineer** - BenchSci, Toronto Sep 2017 – April 2018

- Managed a web crawler; parallelized the crawler leading to a 10X speed increase.
- Designed webpages using Django and React; helped decouple the frontend from the backend leading to increased code reusability.
- Wrote and optimized queries for neo4j; increased the speed of queries by 5X.
- Interfaced with (and created a few) RESTful APIs.

**Software Development Engineer Intern** - Amazon Development Center, Chennai Jan 2015 – July, 2015

- Developed an internal tool to static analyze codebases by generating a graph of dependencies and isolating sections of the code that is affected by check-ins.
- Worked on Facebook's pfff tool and added features to enrichen the graph generated by pfff.
- Ported graph from pfff to TitanDB, a graph database, and wrote queries to derive insights from it.
- Code: `https://github.com/krishnavaidy/pfff`

## Research Experience

**Research Assistant** - University of Waterloo, Canada Sep, 2015 – Aug, 2017
**Supervisor:** Prof. Naomi Nishimura

- Formulated problems in reconfiguration of colorings - specifically acyclic and equiable colorings - and developed algorithms and complexity results for the same.

## Publications

- Tesshu Hanaka, Takehiro Ito, Haruka Mizuta, Benjamin Moore, Naomi Nishimura, Vijay Subramanya, **Krishna Vaidyanathan**. *"Reconfiguring spanning and induced subgraphs".* Computing and Combinatorics 438 (2018).
- **Krishna Vaidyanathan**. *"Reconfiguring Graph Colorings".* MS thesis. University of Waterloo (2017).
- Robin Cohen, Alan Tsang, **Krishna Vaidyanathan**, Haotian Zhang. *"Analyzing Opinion Dynamics in Online Social Networks".* BigDIA (Big Data and Information Analytics) (2016).
- Jasine Babu, L. Sunil Chandran, **Krishna Vaidyanathan**. *"Rainbow matchings in strongly edge-colored graphs".* Discrete Mathematics 338.7 (2015).

## Technical Skills

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|---|---|---|
| **Languages** | : | Java, Python, Kotlin, JavaScript, Shell |
| **Platforms** | : | Linux, Windows |
| **Tools** | : | Oracle/SQL, neo4j, React, Django, Docker |
| **Cloud** | : | AWS, DigitalOcean, Azure, GCP |

## Awards

- Awarded the **Outstanding TA Award** by the *University of Waterloo* in 2017.
- Adjudged the **Best All Rounder** by *PSG College of Technology* in 2015.