Krishna Vaidyanathan

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EDUCATION

UNIVERSITY OF WATERLOO
M.Math in Computer Science
Sep 2015 - Aug 2017 | Waterloo, Canada

PSG COLLEGE OF TECHNOLOGY
Integrated M.Sc. in Theoretical Computer Science
June 2010 - Aug 2015 | Coimbatore, India

LINKS

Github:// **krishnavaidy**
LinkedIn:// **krishna.vaidyanathan**

COURSEWORK

GRADUATE
Experimental OS Techniques
Design & Analysis of Algorithms
Trust Modeling & Online Social Networks

UNDERGRADUATE
Machine Learning
Operating Systems
Parallel & Distributed Computing

SKILLS

PROGRAMMING
Python • Javascript • Shell • C++ • Matlab • LaTeX

TOOLS
React • neo4j • Docker • Django • Flask • Express

CLOUD
AWS • DigitalOcean • Azure • GCP

EXPERIENCE

COINSQUARE MINING | Full Stack Developer
May 2018 - Present | Toronto, Canada

- Developed and managed a bot written in Django and React to buy and monitor orders on www.nicehash.com; 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.

BENCHSCI | Backend Engineer
Sep 2017 - April 2018| Toronto, Canada

- 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 queries to a graph database (neo4j); increased the speed of queries by 5X.
- Interfaced with (and created a few) RESTful APIs.

AMAZON | SDE Intern
Jan 2015 – July 2014 | Chennai, India

- 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.

RESEARCH

ALGORITHMS & COMPLEXITY LAB, UNIVERSITY OF WATERLOO | Research Assistant
Sep 2015 – Aug 2017 | Waterloo, Canada

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"*. arXiv preprint arXiv:1803.06074 (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).

AWARDS

2017 Outstanding TA Award, University of Waterloo
2015 Best All Rounder, PSG College of Technology