

Krishna Vaidyanathan

krishna.vaidyanathan|
krishna.v.psg@outlook.com | 226.978.2760

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 • Airflow

CLOUD

AWS • DigitalOcean • Azure •

GCP

EXPERIENCE

BENCHSCI | BACKEND ENGINEER

Sep 2017 - Present | 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 equitable 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