KASRA **JAMSHIDI**

Parallel & Distributed Computing Lab · Simon Fraser University, BC, Canada
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EDUCATION

SEP 2019 – PRESENT
PHD COMPUTING SCIENCE, SIMON FRASER UNIVERSITY

- Advisor: Dr. Keval Vora

SEP 2014 – AUG 2019
BSC HONOURS COMPUTING SCIENCE, SIMON FRASER UNIVERSITY

- Minor in Mathematics
- Thesis: Pattern-Aware Graph Mining

PUBLICATIONS

- **A DEEPER DIVE INTO PATTERN-AWARE SUBGRAPH EXPLORATION WITH PEREGRINE**
  SIGOPS Oper. Syst. Rev. 55, 1, July 2021
  Kasra Jamshidi, Keval Vora

- **PATTERN-MORPHING FOR EFFICIENT GRAPH MINING**
  ArXiv Preprint, Dec 2020
  Kasra Jamshidi, Keval Vora

- **PEREGRINE: A PATTERN-AWARE GRAPH MINING SYSTEM**
  European Conference on Computer Systems (EuroSys), April 2020
  Kasra Jamshidi, Rakesh Mahadasa, Keval Vora
  https://github.com/pdclab/peregrine

WORK EXPERIENCE

SEP 2019 – PRESENT
RESEARCH ASSISTANT, PARALLEL & DISTRIBUTED COMPUTING LAB

- Research novel methods to improve graph mining performance, including published discovery of pattern-aware graph mining which lead to +700x performance improvement over state-of-the-art
- Develop open-source software implementations of research to allow evaluation and future work by other groups
- Help direct undergraduate students doing research and capstone projects in the lab

JAN 2017 – SEP 2017
SOLE DEVELOPER, POLLY CHAT

- Designed, developed, and launched a web-based chat application for connecting to native speakers of different languages in responsive, timed chat rooms
- Architected a scalable and fair queuing system on Redis for matching users to chat rooms

JUN 2016 – DEC 2016

SOFTWARE DEVELOPER TRAINEE, NEXEDI INC

- Wrote user tutorials for Nexedi's distributed out-of-core processing system Wendelin
- Implemented user-friendly API for Wendelin, enabling a familiar Python data science interface while hiding unsafe operations
- Assisted in CEO's presentation to industry leaders about Nexedi's big data capabilities

HONOURS & AWARDS

JAN 2022

CLARK WILSON LLP GRADUATE SCHOLARSHIP

- Undergraduate research award, worth $7,000

SEP 2021

SFU CS GRADUATE FELLOWSHIP

- One year fellowship, worth $8,000

DEC 2020

BEST POSTER AWARD

- Voted best poster by faculty at the SFU CS department's annual poster competition

SEP 2019

SFU CS GRADUATE FELLOWSHIP

- One year fellowship, worth $6,500

JAN 2018

VPR USRA

- Undergraduate research award, worth $7,000

APR 2014

GORDON M. SHRUM SCHOLARSHIP

- Undergraduate scholarship awarded for service and academic excellence, worth $24,000

OTHER RESEARCH EXPERIENCE

AUG 2018 – AUG 2019

PATTERN-AWARE GRAPH MINING

- Subject of directed reading, USRA, and undergraduate honours thesis
- Surveyed state-of-the-art graph mining systems, including profiling to determine bottlenecks
- Developed pattern-aware approach that would later become Peregrine

JAN 2018 – MAY 2018

OBJECT-CLUSTERING ROBOT SWARM

- Term project for CMPT 882 - Special Topics in AI (taken as an undergraduate, grade: A)
- Simplified existing compute-free, communications-free robot design resulting in cheaper robot swarms that finish object clustering tasks 2-3x faster
- Applied novel environmental manipulation method to further improve speed by 5x

COMMUNITY SERVICE

MAY 2018 – MAY 2019

PRESIDENT, COMPUTING SCIENCE STUDENT SOCIETY

- Organized week-long student trip to Silicon Valley for tours and networking events with Google, Apple, Stripe, and other companies in the area
- Organized tour and networking night for students and alumni at Electronic Arts
- Taught workshops on foundational technologies for CS undergrads: Linux and git
- Organized a research hackathon where teams of students tackle novel problems
- Directed and supported executive team in day-to-day operations of the Society, including event-planning, financial management, and engagement testing

AUG 2018 – NOV 2018

TECHNICAL WRITER, CHILDREN'S FOUNDATION OF BC

- Wrote program funding proposals to BC Ministry of Children & Family Development
- Documented internal procedures for caregivers and office workers
- Edited and clarified technical manuals for internal systems