

# KASRA JAMSHIDI

Parallel & Distributed Computing Lab · Simon Fraser University, BC, Canada  
kjamshid@cs.sfu.ca · <https://kjamsh.com> · <https://github.com/kjamsh>

## 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

## PUBLICATIONS

- **A DEEPER DIVE INTO PATTERN-AWARE SUBGRAPH EXPLORATION WITH PEREGRINE**  
SIGOPS Oper. Syst. Rev. 55, 1, July 2021  
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
- Scalable architecture and rapid development using Vagrant, nginx, Lapis, PostgreSQL, Redis

**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**

- Competitive award for excellent research in the field of Intelligent Systems, worth \$1,400

**SEP 2021**

**CS GRADUATE FELLOWSHIP**

- One year fellowship granted by SFU to strong graduate students, worth \$8,000

**DEC 2020**

**BEST POSTER AWARD**

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

**SEP 2019**

**CS GRADUATE FELLOWSHIP**

- One year fellowship granted by SFU to strong graduate students, worth \$6,500

**JAN 2018**

**VPR USRA**

- Competitive 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