

XINRUI JIA

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EDUCATION

École Polytechnique Fédérale de Lausanne (EPFL)

PhD candidate, Computer Science, Theory of Computation Lab

Research: Clustering, discrete optimization, approximation algorithms.

09.2018 - Present

Lausanne, Switzerland

University of Waterloo

Bachelor of Mathematics, with Distinction - Dean's Honours List

Majors: Combinatorics and Optimization, Pure Mathematics

09.2014 - 06.2018

Waterloo, Canada

WORK EXPERIENCE

AI/ML Intern, Apple Inc.

Applied research in optimization on Machine Learning Platform and Technologies team.

06.2021 - 12.2021

Zurich/Heidelberg (remote)

Teaching Assistant, EPFL

Conducted exercise sessions for the classes Theory of Computation and Algorithms. Held head TA position, responsible for coordinating teaching duties and communication between professor and team of student TAs.

02.2019 - 07.2021

Lausanne, Switzerland

Private Tutor

Tutoring through video conferencing of University of Waterloo classes: Analysis, Intro to Optimization, Intro to Combinatorics, Graph Theory.

06.2020 - 05.2021

Remote

Backend Application Developer, HAA Analytics

Used Python, NumPy, Pandas, SQL to build reinsurance analytics web app at start-up. Collaborated with team of 6 programmers in every part of software development cycle. Product successfully demoed 3 months into internship.

05.2015 - 08.2015

Toronto, Canada

RESEARCH EXPERIENCE

Research Intern, EPFL Discrete Optimization Lab

Made improvements to guarantees for two algorithms for maximum dispersion problem and explored applications to image recognition. Presented results with visualizations made using PyGame.

01.2017 - 04.2017

Lausanne, Switzerland

Research Intern, Univ. of Waterloo

Implemented key-exchange protocol using C++ and SageMath. Developed a cryptanalysis for proposed post-quantum Diffie-Hellman key-exchange protocol.

05.2016 - 08.2016

Waterloo, Canada

PROGRAMMING LANGUAGES

Experience with Python, Scheme, Java, C/C++, Matlab, SQL.

LANGUAGES

English: *Native*. French: *Intermediate*.

PUBLICATIONS

- Xinrui Jia, Lars Rohwedder, Kshiteej Sheth, and Ola Svensson. Towards Non-Uniform k-Center with Constant Types of Radii. In *Symposium on Simplicity in Algorithms* (SOSA 2022).
- Buddhima Gamlath, Xinrui Jia, Adam Polak, and Ola Svensson. Nearly-tight and Oblivious Algorithms for Explainable Clustering. In *Conference on Neural Information Processing Systems* (NeurIPS 2021).
- Xinrui Jia, Kshiteej Sheth, and Ola Svensson. Fair Colorful k-Center Clustering. In *Proceedings of the 21st International Conference on Integer Programming and Combinatorial Optimization* (IPCO 2020).