XINRUI JIA

xinrui.jia@epfl.ch ◇ xinruij.github.io

EDUCATION

École Polytechnique Fédérale de Lausanne (EPFL) — *09.2018 - Present*
PhD candidate, Computer Science, Theory of Computation Lab — **Lausanne, Switzerland**
Research: Clustering, optimization, online and randomized algorithms.

University of Waterloo — *09.2014 - 06.2018*
Bachelor of Mathematics, with Distinction - Dean's Honours List — **Waterloo, Canada**
Majors: Combinatorics and Optimization, Pure Mathematics

WORK EXPERIENCE

AI/ML Intern, Apple Inc. — *06.2021 - 12.2021*
Applied research in optimization on Machine Learning Platform and Technologies team. — **Zurich/Heidelberg (remote)**

Teaching Assistant, EPFL — *02.2019 - 07.2021*
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. — **Lausanne, Switzerland**

Private Tutor — *06.2020 - 05.2021*
Tutoring through video conferencing of University of Waterloo classes: Analysis, Intro to Optimization, Intro to Combinatorics, Graph Theory. — **Remote**

Backend Application Developer, HAA Analytics — *05.2015 - 08.2015*
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. — **Toronto, Canada**

RESEARCH EXPERIENCE

Research Intern, EPFL Discrete Optimization Lab — *01.2017 - 04.2017*
Made improvements to guarantees for two algorithms for maximum dispersion problem and explored applications to image recognition. Presented results with visualizations made using PyGame. — **Lausanne, Switzerland**

Research Intern, Univ. of Waterloo — *05.2016 - 08.2016*
Implemented key-exchange protocol using C++ and SageMath. Developed a cryptanalysis for proposed post-quantum Diffie-Hellman key-exchange protocol. — **Waterloo, Canada**

PROGRAMMING LANGUAGES

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

PUBLICATIONS

1. 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).
2. 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).
3. 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).