DAVID CHEIKHI

cheikdav.github.io d.cheikhi@columbia.edu (646)-853-9464 400 West 119st Street, New York, NY, 10027

EDUCATION

Graduate School of Business, Columbia University, New York, NY Sep 2021 - Current
PhD Candidate in the Decisions, Risk and Operations (DRO) division, adivsed by Prof. Dan Russo.

Columbia University, New York, NY Sep 2019 - Dec 2020
Master of Science in Computer Science - Machine Learning Track
Dynamic programming, Reinforcement Learning, Machine Learning Theory, Optimization

Ecole polytechnique, Paris, FR Sep 2016 - Jul 2019
- Master of Science in Applied Maths and Computer Science - Operations Research Track
  Operations Research, Mathematical Programming, Randomized Algorithms
- Bachelor of Science in Applied Maths and Computer Science
  Probability, Statistics, Stochastic Processes, Algorithm Design, Complexity Theory

Lycée Henri Poincaré, Nancy, FR Sep 2014 - Jun 2016
Competitive undergraduate program in mathematics, physics and computer science
Algebra, Differential calculus, Discrete Probability

RESEARCH INTEREST

My interests broadly span decision making under uncertainty with a focus on sequential decision making such as reinforcement learning, optimization under bandits feedback and policy evaluation. Currently, I'm focusing on how to make RL efficient for long-term problems.

REFEREED CONFERENCES PAPERS

On the statistical benefit of Temporal Difference Learning, ICML 2023
with Prof. Daniel Russo
- **Oral, ICML 2023**
- **Best poster award, APS 2023**
- **Finalist - APS Best student paper award, 2023**

Stochastic Flows and Geometric Optimization on the Orthogonal Group, ICML 2020
with K. Choromanski, J. Davis, V. Likhosherstov, A. Nazaret, A. Bahamou, X. Song, M. Akarte, J. Parker-Holder, J. Bergquist, Y. Gao, A. Pacchiano, T. Sarlos, A. Weller, V. Sindhwani

WORK EXPERIENCE

Google, Paris, FR May 2020 - Oct 2020
Research Software Engineer Intern - Operations Research
- Built a dataset and a model predicting the latency of the Vehicle Routing solver *C++, Python*
- Enabled a better scheduling of instances
- Lead to a better understanding of how features impact the solve time

Google, Paris, FR — Apr 2019 - Aug 2019
Software Engineer Intern - Operations Research

- Designed an algorithm to split large constrained Vehicle Routing problem instances *C++*
- Enabled to solve significantly larger instances by splitting them first

Google, London, UK — Jun 2018 - Aug 2018
Site Reliability Intern

- Creation of a pipeline to get data from the servers *GoLang*
- Calibration of models to compute a unite of measurement of hardware performance *Python*

AWARDS

TA Fellowship, Columbia University, Computer Science Department — Fall 2020

Bronze medal, SWERC (South Western European) ACM ICPC — 2018,2019

Silver medal, International Mathematics Competition (IMC) — 2017

Bronze medal, International Olympiads in Informatics (IOI) — 2014

TEACHING EXPERIENCE

Columbia Business School, Columbia University, New York, NY — Oct 2020 - Dec 2020

- TA: Foundations of Statistical Modeling (PhD core), *Spring 2023*
- TA: Managerial Statistics (MBA core), *Fall 2022, Fall 2023*
- TA: Sports Analytics (MBA elective), *Summer 2022, Fall 2022, Summer 2023*

SEAS School of Engineering, Columbia University, New York, NY

- Teaching Assistant: Analysis of Algorithm, *Fall 2020*
- Teaching Assistant: Randomized Algorithms, *Fall 2019*

Science Ouverte (Open Science), Drancy, FR — Sep 2016 - Apr 2017
Intern

- Science Ouverte is an association which promotes science in high priority education area
- Teaching science to primary school, middle school, high school and undergraduate students
- Creation and animation of science popularization activities

France-IOI, Paris, FR — Sep 2016 - Present
Volunteer coach

- Volunteer coach in algorithmic boot camp for high school students