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MANON REVEL

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I leverage applied mathematics, machine learning and data science to understand information disorders and collective voting behaviours. I aim at tackling social issues promoting multi-disciplinary approaches.

Education

Sep.*17-Dec.22* **MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT),** *MS & PhD in Social and Engineering Systems*
Relevant coursework: Fundamentals of Statistics, Statistics Computation & Application, Causal Inference, Fundamentals of Probability, Modern Probabilities, Social Choice Theory, Network Science & Models, Optimized Democracy, Data-Driven Decision Making and Society, Political Economy, Philosophy of Political Economy

Sep.*15-Jun.17* **ÉCOLE CENTRALE PARIS,** *BS in Engineering, MS in Applied Mathematics*
Relevant coursework: Probability, Statistics, Algebra and Cryptology, Algorithms and Programming, Machine Learning, Software Engineering, Economy, Sociology, Law, Epistemology

Work Experience

Sep.*17-Now* **MIT - Institute for Data, Systems, and Society (MA)** Research Assistant (Applied Mathematics)
Networked behaviors (with D. Halpern, A. Procaccia, J. Halpern, E. Mossel, P. Hosoi and A. Jadbabaie)
- Model probabilistic voting systems relying on graph topology and opinion dynamics to investigate theoretical behavior of a novel model of governance: fluid democracy
- Studied strategic behaviour in NBA teams based on players' positions and decisions (terabyte-size dataset)

Information disorders (with A. Tohidi, BY. Park, A. Abecassis, M. Dahleh, A. Jadbabaie, A. Berinsky and D. Eckles)
- Study resonance of narratives with the citizenry and its interplay on social movements in France through a corpus of public opinion surveys and scraped media output
- Leverage 100k Reddit posts on tinnitus with NLP and network's dynamics to understand peer-support online
- Measured the impact of online marketing on journalism credibility since the 2016 US election. Conducted NLP and Baysian analyses of 1M headlines, and randomized experiments (n=10,000) testing ads' causal effects

Jun.-*Sep.19* **AEROSPACELAB *(Belgium)*** Machine Learning (ML) Consultant
- Designed strategic guidelines for software development. Created modules for monitoring threats on social media, from data collection (Twitter, YouTube & Reddit) to language analysis and network dynamics

May.-Aug.18 **CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES *(DC)*** Research Intern in Technology and Policy
- Led study on the impact of the Internet ecosystem and regulation on people's relation to information
- Collaborate with lawyers, industry partners and state officials to inform policy makers about GDPR

Jun.-*Aug.17* **NOKIA BELL LABS - Network, Algorithms, Analytics, Control and System Lab *(NJ)*** Research Intern in ML
- Optimized slice allocation with forecasting methods and time series analysis to lower communication latency
- Won intern R&D talk contest; and worked on side project with CEO, Marcus Weldon about news credibility

Teaching

Feb.21 **MIT - *IDSS Masters Instructor:*** *Quant Review* — Created and taught seminar in Algebra, Probability and Statistics, and Data science and Algorithmic for 30 Masters Students (Feedback available)

Jul-Aug.20-21 **MIT - *Sloan School MBA TA:*** *Data, Model and Decisions* — Taught 120 MBA Students in Probability, Statistics and Optimization, created content, wrote and graded homework (Evaluation: 6.7/7, details available)

Awards

Hammer Fellow 2019 - Award that empowers first-year IDSS PhD students
Best Masters Thesis Nominee 2019 - One of four finalists for the best thesis award in Technology & Policy
Centrale Talent 2017 - Reward outstanding initiatives and achievements of a student at École Centrale Paris
Coordination Jeunes Promotions 2017 - Best project for the BeeGames Association
Education Award 2012 - Reward exceptional academics, leadership and civic life engagement in Ile-de-France

Skills & Interests

Python, R, SQL, HTML, MicrosoftOffice (JAVA, Matlab, CSS)   French, English, Italian (Spanish)

Journalism: Created a newspaper and worked for two radios (Radio Parenthses and Soleil de Re), writing editorials and hosting live political shows between 2010 and 2018
Basketball: Practice in competition on national level, coach. Won MIT-IM with super team. **Windsurfer, runner**

Service & Leadership

Jun.19-Now	**Conference on Decision and Control and for the American Control Conference (USA)**	Reviewer

Jun.21   **International Conference of the Web and Social Media** *(ICWSM, remote)*   Workshop Organizer

Organize a 1-day workshop *Alternative Realities in Troubled Democracies* with 100 participants, focused on understanding, measuring and mitigating informations disorders. Create workshop's content, advertise event. Select submitted papers for presentations. Host David Rand and Renee DiResta as guest speakers

Jan.21   **LIDS Student Conference** *(MA)*   Conference Chair and Organizer

Organized a 1-day online conference featuring the work of 28 MIT LIDS student. Hosted Zico Kolter and Kimon Drakopopoulos as guest speakers. Lead the Machine Learning and Statistics Session. Created community content

Apr-Jul.20   **MIT - IDSS Covid-19 COLLABORATION** *(ISOLAT, remote)*   Researcher

Designed opting-out and class schedules for MIT back-to-campus strategy

Sep15-Jun18   **BeeGames Association** *(Paris, France)*   Founder and Chair Person

Launched a cross-functional collaboration between companies, universities, and basketball professionals. Lead of a 25-person team creating a network of investors and organising events with partners. Worked with basketball professional athletes and federations (BeeGames' official sponsor was Boris Diaw)

Publications

Peer-reviewed

Dec.21   *Varieties of Resonance: The Subjective Interpretations and Utilizations of Media Output in France,* **Poetics**

Working Papers

Delegation schemes for which fluid democracy outperforms majority voting on the complete graph
The optimal size of an epistemic congress (Under Review)
Native advertisement and the credibility of online publishers (Under Review, link to pre-print)
What can we learn about tinnitus from social media posts?

General Media & Published Reports

Aug.20   **MIT ISOLAT**, *Rules of Thumb: Adjusting Class Schedules in Fall Term '20* (link)
July.20   **MIT ISOLAT**, *A privacy-preserving opt-out mechanism for returning to campus* (link)
Aug.19   **L'Hémicycle** *(France),* Article (in French): *Internet, you lie!* (link)

Talks

Apr.21   **LIDS Tea Talk** *(MA)*, Talk: *Fluid Democracy: An Alternative Approach to Decision-Making in Democracy*
Aug.20   **IC2S2** *(MA)*, Talk: *The effect of native advertising on the U.S. News Industry*
Apr.20   **WiDS** *(MA),* Panel: *Data weaponized, data scrutinized: a war on information*
Sept.18   **College of Computing Launch** *(MA)*, Poster: *Online Ads: Failure of Quick-Fix Solution to Journalism Crisis*
Sept.18   **IDSS Advisory Board,** *(MA)*, Poster: *Online Ads: Failure of Quick-Fix Solution to Journalism Crisis*
Jun.18   **TMP Consortium** *(Netherlands),* Talk: *The role of the CRNs in online misinformation*
May.17   **French ENT annual congress** *(Portugal),* Invited speaker: *Will expert systems displace clinical intuition?*

News Coverage

Nov.20   **MIT News**, *Understanding how people make sense of information in the information age* (link)
Oct.20   **LIDS/All***, Understanding how people make sense of information in the information age* (link)
Aug.19   **MIT News**, Combining artificial intelligence with their passions (link)
Sept.18   **Alter Ago Le Mag** *Manon Revel: En deça et au-delà des algorithmes* (Under and beyond algorithms) (link)