Maria Jahja

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EDUCATION

Carnegie Mellon University, *Ph.D., Joint Statistics and Machine Learning* 2017 – 2022*
Advisor: Ryan Tibshirani. Thesis: "Sensor Fusion Frameworks for Nowcasting."
M.S., *Statistics* (2019).

North Carolina State University, *B.S., Statistics and B.S., Economics* 2013 – 2017
Cumulative GPA: 4.0/4.0, *summa cum laude*.

INDUSTRY EXPERIENCE

Google YouTube, *Data Scientist Intern* 2021
Developed causal estimates of impact on creators from video classifiers. (Python)

Argo AI, *Motion Planning Research Intern* 2019 – 2020
Researched trajectory selection methods for self-driving cars. (Python, C++)

Argo AI, *Software Engineering Intern* 2018
Wrote training features and metrics for motion planning in self-driving cars. (C++, Python)

SAS Institute, *Advanced Analytics Intern* 2014 – 2017
Developed prototypes for SAS Visual Data Mining & Machine Learning. (SAS, Python, R)

RESEARCH EXPERIENCE

Carnegie Mellon University, *Delphi Research Group Core Member* 2017 – present
Advisor: Ryan Tibshirani. Research on nowcasting methods and tools to track seasonal influenza levels and COVID-19 infections.

North Carolina State University, *Undergraduate Research Assistant* 2015 – 2017
Advisor: Eric Laber. Wrote video games for testbedding dynamic decision-making algorithms.

University of Western Ontario, *Visiting Undergraduate Research Student* 2016
Advisor: Daniel Lizotte. Studied algorithms for estimating uncertainty in competing outcome treatment decisions.

Duke–National University of Singapore Medical School, *Research Intern* 2016
Advisor: Bibhas Chakraborty. Worked on simulations for precision medicine schemes.

PAPERS AND PATENTS

- **M. Jahja**, A. Chin, R. J. Tibshirani; "Real-Time Estimation of COVID-19 Infections via Deconvolution and Sensor Fusion." 2021.
- A. Reinhart, L. C. Brooks, **M. Jahja**, A. Rumack, J. Tang, [et al., including R. J. Tibshirani]; "An Open Repository of Real-Time COVID-19 Indicators." *Proceedings of the National Academy of Sciences (PNAS)*, 2021.
- **M. Jahja**, D. Farrow, R. Rosenfeld, R. J. Tibshirani; "Kalman Filter, Sensor Fusion, and Constrained Regression: Equivalences and Insights." *Neural Information Processing Systems (NeurIPS)*, 2019.
- **M. Jahja**, D. J. Lizotte; "Visualizing clinical significance with prediction and tolerance regions." *Proceedings of the 2nd Machine Learning for Healthcare Conference*, 2017.
- **M. Jahja**, D. J. Lizotte; "Prediction regions and tolerance regions for multi-objective Markov decision processes." *Proceedings of the 3rd Multidisciplinary Conference on Reinforcement Learning and Decision Making*, 2017.
- A. Chaudhuri, D. Kakde, **M. Jahja**, W. Xiao, S. Kong, H. Jiang, S. Peredriy, "Sampling method for fast training of support vector data description." *Annual Reliability and Maintainability Symposium (RAMS)*, 2018. U.S. Patent No. 9830558 issued Nov 2017.
- D. Kakde, A. Chaudhuri, S. Kong, **M. Jahja**, H. Jiang, J. Silva; "Peak criterion for choosing Gaussian kernel bandwidth in SVDD." *IEEE Prognostics and Health Management Conference*, 2017. Best Paper Award. U.S. Patent No. 9536208 issued Jan 2017.

HONORS AND AWARDS

2021-2022 Fellowship in Digital Health, Center for Machine Learning and Health, Carnegie Mellon University
2018-2021 NSF Graduate Research Fellowship
2019 Gertrude M. Cox Scholarship
2017 Outstanding Research Award, NC State Statistics
2017 Outstanding Student Award, NC State Economics
2017 Valedictorian, NC State
2013-2017 SAS Institute Scholarship
2013-2017 Frank M. Thompson Scholarship
2013-2017 Dean's List Scholarship

COMPUTING SKILLS

Proficient/working experience: Python, R, Git. *Basic/academic experience*: C++, Java, JavaScript, Julia, SAS, LaTeX.