Marie-Eve Dumas

Computer Science & Mathematics

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https://mxrie-eve.github.io

Skills.

Languages. Python, Java, C++, LaTeX, JavaScript, Bash scripting and UNIX.
Services. Microsoft Azure, Google Cloud.
Other. Git, MATLAB.

Experience.

2017–Present **Software Developer**
DATAPERFORMERS, Montreal, Qc.
- Build customized ETL pipelines in Python that receive and transform data from various sources
- Train and deploy machine learning models to provide data driven solutions

2015–2017 **Graduate Student Researcher**
CFD LAB - MCGILL UNIVERSITY, Montreal, Qc.
- Developed modules in Fortran to model hypersonic flow around aircraft in a Finite-Element framework
- Implemented optimized numerical methods to provide accurate and efficient prediction of surface properties

Education.

2015 – 2017 **Master of Mechanical Engineering** , *Computational Fluid Dynamics.*
MCGILL UNIVERSITY, Montreal, Qc.
Computer Graphics, Finite Element Methods in CFD, Parallel Computing, Computer Simulations, Numerical Modeling and Analysis

2009 – 2013 **Bachelor of Science** , *Major in Mathematics and Minor in Computer Science.*
MCGILL UNIVERSITY, Montreal, Qc.
Data Structures and Algorithms, Numerical Analysis, Algorithm Design, Algorithmic Game Theory, Analysis, Algebra, Calculus, Mathematical Logic, Probability, Statistics

Publications.

2017 Dumas, M. E., Habashi, W. G., Baruzzi, G. S, Isola, D. and Fossati, M. "*Finite Element Modeling of Nonequilibrium Fluid–Wall Interaction at High–Mach Regime,*" in *Journal of Aircraft*, Vol. 54, No. 6, pp. 2330-2339.

2016 Dumas, M. E., Habashi, W. G., Fossati, M., Baruzzi, G. S. and Isola, D. "*Finite element modeling of non-equilibrium fluid-wall interaction beyond the continuum regime,*" in *54th AIAA Aerospace Sciences Meeting*.