MALEK BEN SLIMAN

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EDUCATION

Columbia University — New York, NY
- **PhD in Quantitative Marketing**, Columbia Business School — May 2020
  - Thesis: "Blending computer vision and social network tools to evaluate fine art pieces' influence and valuation"
  - Recipient of the AMA-Sheth Foundation Doctoral Consortium Fellowship (2019)
- **MS in Operations Research**, Columbia Engineering School — Dec 2014

Ecole Centrale Paris — Paris, France
- **MS in Engineering**: Industrial Engineering — Jun 2013
  - Recipient of a 5-year Excellence Scholarship awarded by the French Government

Lycée Louis le Grand — Paris, France
- **Classes préparatoires**: Mathematics & Physics — Jun 2011

SKILLS & COURSES

- **Methods:** Quantitative/Statistical Analysis and Modeling, Machine Learning, Deep Learning, A/B Testing, Data Wrangling
- **Computer skills:** Python, R, SQL, Matlab, Keras, Tensorflow, sklearn, gensim, ggplot2, matplotlib, Tableau
- **Coursework:** Multivariate Statistics, Economics, Econometrics, Graph Theory, Bayesian Methods, Mathematical and Empirical Models in Marketing, Optimization, Consumer Behavior, Industrial Organization, Causal Inference
- **Languages:** French, Arabic, Spanish (elementary proficiency)

EXPERIENCE

Columbia University — New York, NY

PhD Quantitative Researcher — Sep 2015 - Present
- Initiated, led and executed academic research papers, currently under review in top ranked journals and showcased at 5+ international conferences
- Engineered original datasets by constructing robust tools to collect and preprocess social network data and unstructured data
- Implemented state-of-the-art techniques in statistics, machine learning, computer vision and NLP in the following projects:

Blending computer vision and social network tools to evaluate fine art pieces' influence and valuation
Recipient of the Luxury Education Foundation Award 2019
- Developed an art evaluation model based on paintings' aesthetics, novelty, influence, and artists' historical market value
- Scraped and preprocessed 140,000+ fine art auction records containing text and images (i.e. unstructured data)
- Summarized paintings into a low dimensional representation space built using deep learning models (variational autoencoder)
- Quantified artistic novelty and influence by leveraging visual similarity between paintings using social network analysis

Improving the diffusion rate of viral content in social networks
- Developed and streamlined computationally and memory-efficient methods to detect influencers in complex networks
- Proved a theoretical result to systematically measure the expected performance of each detection method
- Achieved a twentyfold improvement through simulations on a Twitter dataset
- Wrote two papers, under review and presented at *Marketing Science (2018)*

Creating a recommendation engine to better suggest academic research pertinent to practitioners
- Leveraged NLP techniques (topic modeling, word embeddings) to design a text-based Relevance-to-Marketing (R2M) index measuring the applicability of academic papers
- Scraped and preprocessed 10,000+ papers published in top marketing, economics, and psychology journals
- Designed an experiment targeted at marketing managers to assess the R2M index's validity
- Paper under review; presented at *Theory+Practice in Marketing (2017, 2018)* and at *Marketing Science (2018)*

Optimizing product recommendations by personalizing the filtering menus offered by online retailers
- Developed a method to dynamically (e.g. after each click) customize the relevant filters to speed up optimal product selection
- Estimated product feature preferences using bayesian nonparametric tools (Dirichlet process) to generate most relevant filters
- Paper under review; presented at *Marketing Science (2019)* and at *Data Science Institute Poster Session (2019)*

Teaching Assistant — Sep 2015 - Present
- Designed curriculum and teaching material for 1,500+ graduate (MBA, MS, PhD) students in: Pricing Strategies, Marketing Strategy and Models, Multivariate Statistics, Digital Marketing
- Launched a MOOC edX Marketing Analytics class taken by 200,000+ students currently in its 5th iteration
- Prepared and taught tutorials on SAS and R programming

INTERESTS

- Wine tasting: organized and chaired tastings, including leading discussions on the wines and how to taste them
- Mixology: certified in Mixology by the Columbia Bartending Agency
- Tennis: won New York League Tennis tournament (2017); captained the Ecole Centrale Paris team to University cup semis
- Cricket: co-founded and led the Centrale Cricket Club as Vice-Captain