Thibault Vatter
Data Scientist

- R, Python, C++, SQL
- Statistics and Machine Learning
- Data Enthusiast

Web: tvatter.github.io
Tel: +1 929 216 7836
Mail: thibault.vatter@gmail.com

EDUCATION

PHD IN STATISTICS | HEC LAUSANNE — Sep 2012 – Mar 2016
Lausanne, Switzerland
- Developed tools to model the effects of covariates on multivariate distributions.
- Tackled the issue of conditional dependence modeling with generalized additive models.

MS IN PHYSICS | SWISS FEDERAL INSTITUTE OF TECHNOLOGY, LAUSANNE (EPFL) — Sep 2010 – Aug 2012
Lausanne, Switzerland
- Minor in Financial Engineering, Swiss Finance Institute

BS IN PHYSICS | SWISS FEDERAL INSTITUTE OF TECHNOLOGY, LAUSANNE (EPFL) — Sep 2006 – Aug 2010
Lausanne, Switzerland

EXPERIENCES

JUNIOR QUANT ENGINEER | SWISSQUANT GROUP AG — Sep 2015 – Apr 2016
Zurich, Switzerland
- Worked as a consultant for the Chicago Mercantile Exchange to develop a risk model for >1'000 futures, vanilla, and exotic products on energy commodities.
- Dealt with alpha research and day-to-day operations of a quant fund in the asset management division.

GRADUATE TEACHING ASSISTANT | HEC LAUSANNE — Mar 2013 – Aug 2015
Gland, Switzerland
- Taught statistics to 900 first-year business school students.
- Modernized the syllabus towards on statistical computing using a browser-based RStudio interface.

INTERN | SWISSQUOTE BANK LTD — Feb 2012 – Aug 2012
Gland, Switzerland
- Worked on methods to combine an investor's subjective market views and quantitative portfolio allocation (from Black-Litterman to Meucci).
- Prototyped the methods to prepare their integration within the bank's digital wealth management tool.

SEMESTER PROJECTS | SWISSQUOTE BANK LTD — Sep 2010 – Sep 2011
Gland, Switzerland
- Modeled the dependence structure of daily equity returns with graph-theoretic tools.
- Developed filtering and visualization tools for large correlation matrices.

RESEARCH

POST-DOCTORAL RESEARCHER | COLUMBIA UNIVERSITY — April 2017 – Present
New York, USA
- Developed copula-based solutions to problems such as mean/quantile regression and classification.
- Implemented a C++ vine copula library available at http://vinecopulib.org.

POST-DOCTORAL RESEARCHER | OPLAB, HEC LAUSANNE — Aug 2016 – Dec 2016
Lausanne, Switzerland
- Analyzed 1.5 years of intra-daily sales for >4'000 products in 10 retail stores.
- Developed a forecasting system of peak intra-daily demand using quantile regression forests.

POST-DOCTORAL RESEARCHER | CHAIR OF STATISTICS, EPFL — May 2016 – Dec 2016
Lausanne, Switzerland
- Worked on the homogenization of climate records.
- Developed a method combining robust statistics and generalized additive models to detect and correct non-climatic inhomogeneities (e.g., relocations or instrumentation upgrades).

VISITING SCHOLAR | YU RESEARCH GROUP, UC BERKELEY — Sep 2012 – Mar 2013
Berkeley, CA
- Analyzed intra-daily foreign exchange rates data using time-frequency decompositions.
- Developed a tool to extract trends and periodic patterns in high-frequency financial data.

SKILLS

PROGRAMMING
• R • Python • C++ • SQL • LaTeX • Git • Markdown • Mathematica • MATLAB

LANGUAGES
• English • French

OTHER
- Air sports • Obtained a private pilot licence (PPL) on a Robin DR400.
- Event organization • Founded a music festival, served as VP and responsible for fundraising of another.