

**Nicolas
STALDER**

**Dr. sc.
ETH Zürich**

**Swiss Citizen
September 24, 1979**

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SUMMARY

Over 1 year in marketing/CRM, over 4 years in high-frequency finance, after 5 years in academia.

Owner attitude, taking responsibility and making things happen.

Excellent analytical skills with proven track record.

Excellent software design and implementation skills, proven results.

“Converting grand visions into stark reality while collaborating with great minds and tackling analytical challenges is my passion.”

WORK EXPERIENCE

eBay, Zurich, Switzerland — www.ebay.com, via

Stamford Consultants — www.stamford-consultants.com

RTB Quantitative Analyst — January 2014 - January 2015

eBay is one of the largest international online market places. Its marketing and CRM operations for the European Union (UK, DE, FRITES) are headquartered in Zurich. I was entrusted with leading the analytics behind RTB Display, its fastest growing online marketing channel. After announcing the planned split of PayPal and eBay in September 2014, all contracting positions were not extended, including mine.

Responsibilities

- Development of RTB bidding algorithms
- Optimization of overall RTB spend
- A/B tests and multi-armed bandit algorithm
- Development of view-through and visibility-based incremental attribution model based on vast and detailed internal user data (multi-Terabyte scale)
- Generation of highly personalized, highly cost-effective display impression models
- Answering to ad-hoc business requests, coordination with multiple internal and external partners

Accomplishments

- Incremental attribution model (R, Hadoop/Hive, Teradata)
- Integration of third-party data sources: enriched log files for billions of EU display impressions, visibility data from embedded Javascript (Hadoop/Hive, Teradata, Python, Bash, Jenkins)
- Localization of dynamic creatives to EU market improving ROI by 2-3x (proprietary XML-based creative models)
- Server-to-server integration with DSP allowing targeting of precise user segments, both for ROI optimization and as support of other CRM and marketing channels
- Visualization of spend/return patterns for multitude of variables (Python, Matplotlib, R)
- Implementation of actual RTB bidding algorithm postponed due to technical limitations of third-party DSP service provider

Vincorex AG, Zurich, Switzerland — www.vincorex.ch

Senior Research Analyst — September 2010 - November 2013

Research Analyst — February 2009 - August 2010

Vincorex is a high-frequency trading company operating on 7 markets worldwide, taking advantage of market inefficiencies using quantitative statistical arbitrage strategies in futures, equities and FX. Due to weak P&L results in 2013 and unwillingness of the shareholders to continue, the company was liquidated.

Responsibilities

- Optimization and portfolio selection of existing main strategy
- Ongoing backtesting, development and running of new directional and market making strategies
- Lead production software architect, guiding outsourced development team in Serbia
- Employee #1, greenfielding basic infrastructure

Accomplishments

- Several market making strategies`
- Discrete event simulator allowing to realistically test new strategies, compare C++ production with Python optimization, remove production bottlenecks, and provide integration testing
- Central active execution logic and internal matching engine
- Passive order execution strategy improving returns drastically
- Efficient format for handling tick-by-tick quotes and trades data
- Web UI for real-time online trading monitoring
- Intercontinental live feed data interconnects
- Implementation of main proprietary algorithmic trading engine
- Software build and deployment environment
- Back office scripting solutions

TECHNOLOGIES

Boosting, Bootstrapping, Linear Vector Auto-Regression, Neural Networks, Probabilistic Graphical Models, Quadratic Optimization, Random Forests, Self-organizing Maps, Support Vector Machines, Temporal Difference Learning.

Bash, C++, Excel, FIX/FAST, Git, HDF5, Hadoop, Hive, Javascript, Jenkins, JSON, Linux, MATLAB, Mosek, Multithreading, MySQL, NumPy/SciPy, OpenStack, Pandas, PostgreSQL, Python, R, STL/Boost, Scala, Shared Memory, Spark, TCP/IP, Teradata, Tmux, UDP, Vi, Windows, XML, ZeroMQ.

ETH Zurich, Zurich, Switzerland — www.math.ethz.ch

Research Assistant — April 2003 - September 2008

Teaching Assistant — November 2000 - November 2002

Responsibilities

- Various organisational and educational tasks

Accomplishments

- Co-founder of the Graduate Colloquium, the joint math seminar of ETH and UZH — www.zgsm.ch/?gradcoll
- Co-founder of SiROP, a web portal that allows scientists and students of all faculties to post and search open positions — www.siroptglobal.org

EDUCATION

ETH Zurich — Dr. sc. ETHZ (pure mathematics):

Algebraic monodromy groups of A -motives, 2003–2007

ETH Zurich — Dipl. math. ETHZ (mathematics and physics):

Zum p -Rang von Kurven mit Automorphismen, 1998–2003

Kantonsschule Zug, CH & Central High School, Philadelphia, USA, 1991-1998

The Mall School, Twickenham, GB & Primarschule Unterägeri, CH, 1985-1990

LANGUAGES

- Englisch, German, Swiss German - excellent
- French - intermediate

CONFERENCES

- June 2011, Amsterdam, High Frequency Trading World
- May 2005, Oberwolfach. Finite Group Schemes and p -divisible Groups

PUBLICATIONS

- The semisimplicity conjecture for A -motives, *Compositio Mathematica*, 2009
- On p -rank representations, *Journal of Algebra*, 2004

REFERENCES

Please enquire for contact details of the references below:

Wonil Chang

Senior Quantitative Analyst at eBay

Jennifer Johnston

CEO at Stamford Consultants AG

Dr. Andreas Meyer de Voltaire

Former CEO at Vincorex AG, former Research Associate at IMC Zug AG

Daniel Riek

Senior Director Systems Design and Engineering at Red Hat, former CTO at Vincorex AG

Prof. Dr. Richard Pink

Professor of Mathematics at ETH Zurich, Ph.D. Advisor