Patrick Aschermayr

Seeking a challenging and research-driven environment where I can develop and make a meaningful contribution.

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PROFESSIONAL SUMMARY

- Researcher with experience applying Bayesian methods to financial markets
- Specialized in sequential learning algorithms to detect regime changes and structural shifts in time-series data
- Proficient in signal enhancement and combination techniques, utilizing Bayesian uncertainty propagation and adaptive online learning algorithms
- Expert in incorporating practitioner knowledge into quantitative models through Bayesian priors and hierarchical frameworks
- Adept at building production systems with ability to quickly pivot between research topics

WORK EXPERIENCE

Brevan Howard — (FT) 2023 –
Quantitative Researcher, Global Macro — Geneva, CH

Fixed-income alpha research with short/medium-term holding periods

- Created regime and trend identification tools for signal enhancement, combining uncertainty quantification with probabilistic changepoint analysis
- Implemented mean reversion speed estimation model for signal timing optimization, quantifying state-dependent dynamics to identify optimal entry opportunities
- Designed adaptive signal combination framework with dynamic reweighting based on time-varying signal performance and relative effectiveness
- Built forecast aggregation and herding detection pipeline for economic surveys, extracting market expectations and dispersion uncertainty

University of Zurich & ZZ (Schweiz) AG — (PT) 2016 – 2018
Portfolio Management Program — Zurich, CH

- Progression from analyst to portfolio manager for managing 2M CHF in Global Macro strategies with focus on EM Carry and Value

Deutsche Bank — (INTERN) 10/2015 – 07/2016
Research - Strategic Beta Intern
Portfolio Management - Multi Asset Intern — Frankfurt, GER

EDUCATION

London School of Economics and Political Science — 2018 – 2023
Doctor of Philosophy — London, UK
Statistics

Thesis: Sequential Bayesian Learning for State Space Models

- Developed online Bayesian inference methods for latent variable models
- Applicable to regime detection and uncertainty quantification in time-series context

ETH Zurich, University of Zurich — 2016 – 2018
Master of Science — Zurich, CH
Quantitative Finance
GPA: 5.4 (Best: 6.0)

Vienna University of Economics and Business — 2012 – 2015
Bachelor of Science — Vienna, AUT
Economics, Business and Social Sciences
GPA: 1.3 (Best: 1.0)

CORE SKILLS

Statistical Machine Learning	Bayesian Statistics Estimation, Prediction, Nowcasting Model Selection and Validation Uncertainty Quantification Dimensionality Reduction
Probabilistic Models	Gaussian Processes State Space Models Regime and Changepoint Detection Mixture Models
Algorithms	Markov Chain Monte Carlo Sequential Monte Carlo Variational Inference/Optimization Particle Filtering
Computing	Python, Julia, R
Software	PyMC, Stan, Turing Numpy/Pandas/Numba
Deployment	Linux Distributed Computing (AWS) Version Control (Git, GitHub)
Infrastructure	Data Visualization (Dash, Plotly) Data Pipeline Engineering
Financial Modeling	Signal Enhancement & Combination Time Series Analysis Herding and Crowding Detection Forecast Aggregation Methods Bottom-up Analysis
Data Engineering	Feature Generation and Selection Manipulation and Exploration
Data Providers	Bloomberg, BQuant Compustat, WorldScope
Soft Skills	Critical Thinking Adaptability Problem Solving
Communication	Oral (Teaching, Seminars) Written (Papers, Editing, Blogging) Project Management (PhD Thesis) Teamwork (Collaborations)

MISCELLANEOUS

Citizenship Austrian
Languages German (Native), English (Fluent)