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 Monte Carlo techniques for uncertainty quantification and highdimensional probabilistic inference
- 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

- Developed trend and regime identification framework for signal generation, combining uncertainty quantification with probabilistic changepoint analysis
- Implemented mean reversion speed estimation system to quantify state-dependent reversion dynamics, enabling early detection of relationship breakdowns
- Built forecast aggregation and herding detection system 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

Thesis: Sequential Bayesian Learning for State Space Models

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

Economics, Business and Social Sciences

GPA: 1.3 (Best: 1.0)

Vienna, AUT

CORE SKILLS

Statistical **Bayesian Statistics**

Machine Learning Estimation, Prediction, Nowcasting

Model Selection and Validation Uncertainty Quantification Dimensionality Reduction

Gaussian Processes **Probabilistic Models**

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

> SK-Learn, mlxtend, Darts Numpy/Pandas/DataFrames

Deployment Linux

Distributed Computing (AWS) Version Control (Git, GitHub)

Infrastructure Data Visualization (Dash, Plotly)

Data Pipeline Engineering

Financial Modeling Herding and Crowding Detection

Time Series Analysis

Forecast Aggregation Methods

Bottom-up Analysis

Data Engineering Feature Generation and Selection

Missing Data Imputation Manipulation and Exploration

Data Providers Bloomberg, BQuant

Compustat, WorldScope

Soft Skills Critical Thinking

> **Adaptability** Problem Solving

Communication Oral (Teaching, Seminars, Conferences)

> Written (Papers, Editing, Blogging) Project Management (PhD Thesis) Teamwork (Collaborations)

MISCELLANEOUS

Languages German (Native), English (Fluent)

Interests Books (fantasy, manga)

Sports (football, fitness) Cooking (Austrian, Asian)

Gaming (Magic, Pokemon, Fire Emblem)