

Oscar Anghammar



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Summary

Mathematician and Software Engineer with a Master's degree in pure mathematics and eight years of professional experience in the fintech sector working with automated trading. Proven track record of developing probability models and executing GPU-accelerated Monte Carlo simulations in production environments.



Education

2015–2017	Various university courses; mainly graduate-level courses in mathematics.
2013–2015	Master of Mathematics , The University of Gothenburg Specialized in pure mathematics.
2010–2013	Bachelor of Mathematics , The University of Gothenburg Specialized in pure mathematics.



Master's Thesis

Title	<i>de Rham Cohomology for Grassmann and Flag Manifolds</i>
Supervisors	Genkai Zhang
Description	This thesis studies both singular- and de Rham cohomologies for the Grassmannian, and compares these two constructions. It also briefly explores Schubert calculus and a possible generalization of Horn's conjecture.



Languages

Swedish	First language
English	Proficient



Experience

2018–2026

Mathematician / Software Engineer, Likelihood AB, *Stockholm*

Fintech company developing a robot for semi-automated trading, mainly targeting sports betting.

- **Engineered end-to-end probability models** for live soccer betting, owning the full pipeline from data scraping and cleansing to predictive modeling, rigorous testing, live-data calibration, and statistical analysis of model performance.
- **Architected a generalized modeling framework** to scale the system for multi-sport implementation, establishing the foundational architecture for basketball and integrating the existing tennis model.
- **Developed full-stack system features**, building intuitive UI elements to seamlessly control and monitor live data filtering and model parameters.
- **Designed and deployed** an automated cryptocurrency trading robot from the ground up.
- **Managed critical system operations**, executing software upgrades, resolving malfunctions during live trading, and acting as technical liaison for system operators.
- **Contributed to team expansion** by driving the hiring and onboarding process for new engineering talent.
- **Technical Environment:**
 - *Generalized* Markov chain models via GPU-accelerated Monte Carlo simulations.
 - Data analysis and production architecture primarily in Scala and MATLAB, alongside TypeScript and GLSL.
 - Libraries used include Circe, Pekko, Apache Commons Math, protobuf, and ReactJS.

2017–2018

Mathematician, Pentech Ltd, *Remote*

Developed and implemented asset allocation algorithms for pension funds. Analyzed financial data and built prototypes in MATLAB, with production implementation in C#.

2011–2017

Teaching Assistant, Chalmers University of Technology, *Gothenburg*

Led exercise sessions for undergraduate courses, mainly in calculus and linear algebra. Instructed MATLAB-based computer exercises, and mentored students in the "Sommarmatte" preparatory mathematics course.



Programming

Scala	<p>Professional Experience</p> <p>Eight years of professional experience in a mixed functional and object-oriented style, operating independently of overarching frameworks. Currently my preferred programming language.</p>
MATLAB	<p>Professional Experience</p> <p>Used extensively since 2011, primarily for numerical tasks and linear algebra. Former preferred language prior to transitioning to Scala.</p>
C#	<p>Prior Professional Experience</p> <p>Ten months of professional experience developing production algorithms at Pentech.</p>
Java	<p>Working Knowledge</p> <p>Strong familiarity with the JVM and integrating Java libraries within Scala applications. Academic background combined with practical experience debugging enterprise Java codebases at Likeligood.</p>
Python	<p>Working Knowledge</p> <p>Maintained various local Python environments for deploying generative AI models. Experience includes refactoring AI-generated code, implementing bug fixes, and adding features to local branches of existing AI projects.</p>
JavaScript	<p>Working Knowledge</p> <p>Maintained data scrapers and resolved UI bugs within existing frontend frameworks at Likeligood.</p>



Technical Proficiencies

Mathematics	Strong foundation in probability modeling, including Markov chains, Monte Carlo simulations, and Kalman filtering. Extensive academic background in linear/multilinear algebra, abstract algebra, real/complex analysis, and topology.
AI/ML	Experienced in local model deployment and inference using ROCm and PyTorch. Proficient in maintaining and optimizing environments for recent generative AI architectures.
OS	Windows, macOS, Linux
Tools	Git, IntelliJ, SBT, L ^A T _E X
Other merits	Driving license B