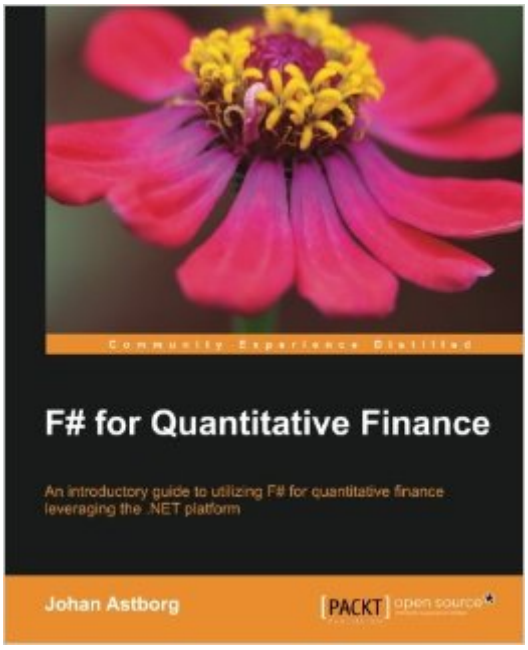
F# For Quantitative Finance



Synopsis

An introductory guide to utilizing F# for quantitative finance leveraging the .NET platform Overview Learn functional programming with an easy-to-follow combination of theory and tutorials Build a complete automated trading system with the help of code snippets Use F# Interactive to perform exploratory development Leverage the .NET platform and other existing tools from Microsoft using F# In Detail F# is a functional programming language that allows you to write simple code for complex problems. Currently, it is most commonly used in the financial sector. Quantitative finance makes heavy use of mathematics to model various parts of finance in the real world. If you are interested in using F# for your day-to-day work or research in quantitative finance, this book is a must-have.This book will cover everything you need to know about using functional programming for quantitative finance. Using a functional programming language will enable you to concentrate more on the problem itself rather than implementation details. Tutorials and snippets are summarized into an automated trading system throughout the book.This book will introduce you to F#, using Visual Studio, and provide examples with functional programming and finance combined. The book also covers topics such as downloading, visualizing and calculating statistics from data. F# is a first class programming language for the financial domain. What you will learn from this book Use Visual Studio as your main tool for writing F# Utilize F# to aggregate data and calculate statistics Plot and visualize data in F# Learn about volatility, delta hedging, and volatility arbitrage Understand basic numerical analysis and algorithm implementation Model orders and market data together with basic pre-trade risk Structure and write object-oriented code Develop larger programs using F# Explore automated trading systems and quantitative trading models Approach The approach is to guide you as a reader from the basics of functional programming and F# to more complex tasks using tutorials and a lot of code examples. As you gain more confidence through out the book, you will be able to modify and write your own code to solve various problems in finance. Who this book is written for If you are a practitioner of quantitative finance, economics, or mathematics and wish to learn F#, then this book is for you. You may have a basic conceptual understanding of financial concepts and models, but no previous knowledge is expected.

Book Information

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Customer Reviews

F# for Quantitative Finance by Johan Astborg is an awesome read even if you don’t know much about Quantitative Finance (Mathematical Finance), or very little, just like myself. I actually became fascinated about the F# as a Functional Langauge. My obsession progressed as I went further through the several first chapters realizing more and more how much the language from Microsoft Research has to offer to a next-gen programmer, minus the affliction about what Visual Studio exposes (which is zilch) to allow building neat UIs in F# (I know, the language prefix ’Visual’ in its name IS missing, so it is hard to blame Visual Studio).Be aware, this book dedicates about half to the F# language particulars solely that by the way are very worth reading. Luckily (or not), no in-depth knowledge of math is necessary.The second half of the book builds on top of what you learned about F# and unfolds into a full fledged trading application (no kidding!). In my humble opinion, the author is a little shy about the application built in the book, and I think this is unjustified. Perhaps this is due to the fact the application’s look is not what would one expect to see at a broker’s station, but hey, only this little can be covered in a single book. The author seems to have even been overdelivering building a World-class application with a test harness and bringing a number of suggestions how to further improve it potentially making it enterprise ready.Anyhow, you may have a live Volatility Arbitrage system at your disposal (if you pay Packt ~ $23 and read till the before-last chapter), and then who knows, may be you are the next millionaire! :-)Now back to Earth, if you do know enough about Quantitative Finance, but not much about F#, likewise, this is your book for sure, too.I suspect that if you know how to program in any language, and don’t know either F# or Quantitative Finance, this is book must be quite approachable by you, as well.In terms of closing, I was thrilled reading this book feeling I am an integral part of building something bleeding edge useful out of carefully crafted re-usable blocks of code, as expressing formulas in F#, trying code in REPL, persisting data, charting cool graphs, and more. Frankly, at times it felt

pretending fulfilling a commercial assignment.On the negative note, the book's code has bugs, easy to spot, and mostly fix. It may be a good idea to learn this way, but it depletes your time not exactly productively. I suggest you simply look beyond them.I hope a new lucky reader will have as much fun as me with this book, it was hard to put it off!5 out of 5 goes to Johan and Packt.

I am not sure if Packt bothered to proofread this book, but it has so many errors on the initial sections demonstrating the basics of F# (I've reported about 12 on pages 17-60 alone) that it makes the rest of the book's contents suspect. You should either look elsewhere or wait until a new edition comes out.

First I have to say the book does have errors, but it wasn't that difficult to fix on my own and move forward. I've learned that it's very hard to spot all of the bugs or errors in code for publishers and I have decided to allow that to slide in my reviews, I want to stay focused on the concepts discussed and how they are delivered to the reader, and that's the most important part in my opinion. I felt that the guidance on F# was well written and easily readable if you do any form of programming in another language, most likely the OOP languages. I was pleasantly surprised to see data structures discussed in such detail including maps and lists which is rare for most programming books I've picked up.That was the first few chapters in the book, the rest of the book walks you along further building your foundation on Quantitative Finances, and this part was not my favorite, not because of the book but because I have a hate/love relationship with math and well i find it boring at times, but the author kept my attention while my coffee pot brewed cup after cup of black gold. Once I got over those chapters it was time to build a working project that would solidify the learning activities so far, and the auto trading program was amazing. I really like how we revisited the program and discussed changes that could take place, and I ABSOLUTELY loved how the author covered the MVC pattern, it's my favorite to work with!I felt this book did a great job of relaying the information to me, and I know an errata has been updated on the publishers website here: [...]

$imple & fluent writing with working short timely free F# example$!! $aves TIME and expense$. An example for other writers to follow. Other shortlist books would be: 2) DSP in Modern Communication Systems by Schwarzinger though it will cost matlab license fee and lack of transparency within matlab code. 3) Theoretical Minimum:to Physics by Susskind. These have improved on Feynman, Strang, Petzold, Goldstein, Openheim, Hansen, even Syme..which missed on short workable exercises found here. This can improve on typo's, dbase, compiler parser

connections.. then Cloud, Web, Threads, Server, Charting, & tips on debugging/digging deeper into underlying code, as F# compiler is open sourced, its all here. Enjoy -Musa

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