Finance Learning Resources for Algorithmic Trading

Books

1. "Investments" by Zvi Bodie, Alex Kane, and Alan J. Marcus
    - A comprehensive textbook that covers fundamental concepts in finance and investment.
2. "A Random Walk Down Wall Street" by Burton Malkiel
    - Provides an excellent introduction to financial markets and investment strategies.
3. "Trading and Exchanges: Market Microstructure for Practitioners" by Larry Harris
    - Offers insights into how financial markets work, crucial for understanding the environment your algorithms will operate in.
4. "Advances in Financial Machine Learning" by Marcos Lopez de Prado
    - While advanced, this book provides valuable insights into applying machine learning to finance.

Online Courses

1. Coursera: "Financial Markets" by Yale University
    - URL: https://www.coursera.org/learn/financial-markets-global
    - A beginner-friendly course that covers basic financial concepts and market dynamics.
2. edX: "Introduction to Computational Finance and Financial Econometrics" by University of Washington
    - URL: https://www.edx.org/learn/finance/university-of-washington-computational-finance-and-financial-econometrics
    - Combines finance with computational methods, which aligns well with your background.
3. Udacity: "Artificial Intelligence for Trading" Nanodegree
    - URL: https://www.udacity.com/course/ai-for-trading--nd880
    - While this is a paid program, it directly addresses AI applications in trading.

Websites and Other Resources

1. Investopedia (https://www.investopedia.com/)
    - An excellent resource for looking up financial terms and concepts.
2. Quantopian Lectures (https://www.quantopian.com/lectures)
    - Although Quantopian is no longer active, their lecture series on quantitative finance is still available and highly valuable.
3. "Chat with Traders" Podcast (https://chatwithtraders.com/)

    - Interviews with professional traders and quantitative analysts can provide real-world insights.

4. Quantstart (https://www.quantstart.com/)
    - Offers articles and tutorials on quantitative trading and financial machine learning.

Getting Hands-On

1. Paper Trading
    - Many brokers offer paper trading accounts. Consider opening one to practice trading without financial risk.
2. Kaggle Competitions
    - Look for finance-related competitions on Kaggle to apply your learning to real datasets.
3. Open Source Projects
    - Explore GitHub for open-source algorithmic trading projects. This can help you understand how others structure their code and approach problems.

Learning Path Suggestion

1. Start with the Coursera "Financial Markets" course for a broad introduction.
2. Read "A Random Walk Down Wall Street" to understand market dynamics and investment philosophies.
3. Take the edX course on Computational Finance to bridge your tech skills with finance.
4. Use Investopedia to look up unfamiliar terms as you encounter them.
5. Begin exploring Quantopian lectures for more trading-specific concepts.
6. As you progress, dive into "Advances in Financial Machine Learning" to understand advanced applications.

Remember, finance is a vast field. Focus initially on understanding market mechanics, basic trading concepts, and how financial data is structured and analyzed. This foundation will be crucial as you develop your algorithmic trading system.