Montgomery Investment Technology, Inc.
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Quantitative Finance Internship

Summary
Montgomery Investment Technology, Inc. of Camden, New Jersey, specializes in the valuation of options and derivatives securities. We deliver software applications, valuation consulting services and training seminars. MITI is seeking an quantitative finance intern for summer 2011 to join our team.

MITI Quantitative Finance Internship Syllabus 2011
Option Valuation Methods and Financial Risk Management

1) Reports
   a) Maintain daily journal
   b) Submit weekly Project Status report
   c) Cost accounting of activities from Outlook calendar

2) Search the internet for articles about options, futures, bonds and portfolio management
   a) Distribute copies of significant articles
   b) Save HTML or PDF of option and finance articles for the MITI research library
   c) Collect names and email address of media editors

3) Suggested Reading List (one or more)
   a) "Options, Futures and Derivatives" by Hull
   b) "Options and Futures" by Clarke
   c) "Futures, Options and Swaps" by Kolb
   d) "Black-Scholes and Beyond" by Chriss
   e) "Options Markets" by Cox and Rubinstein
   f) "A Demon of our Own Design" by Bookstaber
   g) "Money Market Bond Calculations" by Stigum

4) Professional Certification Programs - Body of Knowledge
   a) "Analysis of Derivatives for the CFA Program" by Chance
      i) Learning Outcome Statements
   b) GARP Financial Risk Manager

5) Learn Accounting Standards and Regulations
   a) FAS 123R Share-Based Payments
      i) SEC SAB 107
      ii) PCAOB Guidelines
      iii) Big 4 Implementation Guidance
      iv) IFRS Convergence
   b) FAS 157 Fair Value Accounting

6) Learn and Master FinTools XL
   a) OPTIONS XL, EXOTICS XL, BONDS XL, UTILITY XL, RISK XL
   b) Open all sample templates, review structure, and make suggestions for improvements
   c) Create educational templates for students; add to MBA Navigator
   d) Create specialized templates for traders; add to Trader Tools Navigator

7) Option and Risk Management Strategies (create and enhance Excel templates)

	Option pricing theory		Time series analysis of historical prices
	Put-call parity		Volatility analysis
	Option strategies		Non-normal return distribution analysis
	Synthetic option strategies		Volatility index for individual stocks
	Covered call (yield enhancement): BXM		Volatility index: VIX
	Hedging strategies		Equity portfolio risk analysis
	ESO valuation methods		Portfolio insurance strategy (protective put)
	Alternative SBP awards		Value-at-Risk of an equity portfolio
	SBP cost attribution techniques		Derman skew

8) Update FinTools User's Guide
9) Expand strategy and example sections
10) Add new functionality descriptions, examples and screenshots
11) Bond and Money Market Pricing (Excel template)

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	Bond duration		Types of yield calculations
	Bond convexity		Types of day counts
	Value of an .01 and 32nd		Interest rate swap calculations
	Implied forward rate		Convertible bonds

12) Use Financial Calculators
13) OptionsCalc
14) ExoticsCalc
15) BondsCalc
16) VolatilityCalc

17) Search Internet for investment data, prices and education (free sources)

Option Pricing and Education	www.cboe.com
Stock Prices and Charts	www.esignal.com
Market Prices and Calendar	www.bloomberg.com
Historical Stock Prices	www.nasdaq.com
Company Financial Reports	http://www.edgar-online.com/
Fundamental Data and Stock Prices	http://finance.yahoo.com/q/is?s=IBM&annual
Others	

18) Search internet for options and derivatives training

Option Education	www.cboe.com
OIC Education and Strategy Guide	www.888options.com/learning/getting_started.jsp
CFA Institute	www.cfainstitute.org
Garp	www.garp.com
NYU – Damodaran Online	http://pages.stern.nyu.edu/~adamodar
Others	

19) Web Marketing

   a) Establish reciprocal web links
   b) Sponsored links
   c) Key word search
   d) LinkedIn
   e) Google sponsored links
   f) Search engine optimization

20) Special Projects

   a) Body of Knowledge questions
      i) Write one multiple choice question per week
      ii) Add questions to Finance IQ
   b) Demonstrate communication skills
      i) Written reports
      ii) Verbal instructions
   c) Case studies
      i) Real options in capital budgeting
      ii) Best practice analysis
      iii) Implied zero and forward rates
      iv) Risk-Neutral versus Real World valuation
      v) Monte Carlo Simulation method applied
   d) Excel VBA programming
      i) Excel-based applications

Next Steps
Please visit our website at www.fintools.com to view the business activities of MITI and the market segments that we serve.

Interested applicants should email (in PDF format) a cover letter and resume to:

HR Administration
jobs@fintools.com