<<Numerix Internship Program>>

Applicants please send CV to ilin@numerix.com and mark the applied internship item.

Financial Engineer Intern

Primary Responsibilities:

- Structure real-world examples of trades and perform valuation and/or risk analytics tasks using Numerix CrossAsset library and other Numerix Products and tools under guidance from senior members in the team.
- Work with senior members in the team on various key projects ranging from structuring, valuation, quantitative advisory services, counterparty risk, market risk, ESG, etc.
- Write Requirements Definition (RD) and Product Specifications for vanilla and exotic Derivative products across FI/CC/INF/CR/EQ/FX/CMDT/HYBRID.
- Work as liaison between Customers and Internal Numerix teams (Sales, Business Analyst, PDM, Quantitative Research, Quantitative Development, Implementation, Support, Training, Documentation…).
- Design and perform FE testing on models (calibration and pricing) across multiple asset classes on various Numerix Products.
- Provide consulting and professional services for clients using Numerix products for integrated/independent pricing and risk analytics system.

Experience and Skills Required:

- Working towards a Master degree (or foreign equivalent) in Mathematics, Financial Engineering, Finance, Computer Science, Physics, Actuarial Science or related field.
- Good knowledge and/or hands-on experiences in derivative pricing models and instruments.
- Good knowledge and/or hands-on experiences in Counterparty Risk (CVA,PFE) and/or Market Risk (VaR).
- Strong mathematical skills including stochastic calculus, numerical methods (Tree, PDE), Monte Carlo simulation, probability and statistics; and financial modeling, or quantitative/engineering related research.
- Good hands-on experience with an object oriented programming language. Self-motivated and quick-learning professional able to address complex technical challenges, and produce high quality solutions in an efficient and timely manner.

Qualifications

Experience

Preferred

1 year: Knowledge and/or hands-on experiences in derivative pricing models and instruments across interest rate, cross-currency, credit, inflation, equity, foreign exchange, commodity, insurance, and hybrid products.

Financial Validation Intern

Primary Responsibilities:

- Create and execute financial and functional test plans for the new derivative features following systematic approach working under the direction of the QA department.
- Price real-world trades to ensure that the programming code meets the standards of active traders in these instruments and carryout benchmark studies.
- Perform financial validation of bootstrapping and stripping market dividend, yield, convenience, forward curves, interpolation and construction of volatility surfaces and cubes and making sure that these techniques meet market standards.
- In conjunction with Business Analyst and development teams conduct testing of products by analyzing them to determine likely problem areas, constructing and using sample data to test product failures.
- Prepare financial test cases or scripts and supporting test data for each product feature to ensure that the data adequately tests all possible situations.
- Conduct detail research and analysis of defined financial engineering problems.

Requirements Include:

- Working towards a Master's degree in Financial Engineering, Mathematics or Finance.
- Ability to write test plans and test specs.
- Commitment to acquire a high level of domain knowledge in Financial Instrument valuations through self and assisted studies.
- Experience with a range of numerical methods to solve mathematical problems.
- Strong attention to detail and willingness to take ownership of issues.
- Excellent oral and written and interpersonal skills.
- Strong knowledge of financial mathematics: Models in BS framework, Monte Carlo techniques, Numerical Methods, Stochastic Processes.
- Strong knowledge of derivatives: FI (Interest Rate)derivatives, FX derivatives, Credit Derivatives, Risk/Sensitivity Analysis and/or other asset class.
- Knowledge of risk management techniques: VaR analysis, Tables, PivotTables, etc.
- Ability to build Excel workbooks with high-quality usability, including Graphs, PivotTables, Statistical Analysis
- Excellent, hands-on Excel/VBA and familiarity with object oriented programming.

Qualifications

Experience

Preferred

1 year: •Knowledge in financial engineering concepts
1 year: •Familiarity with Product Structures, Curve Buildings, Pricing Models, Risk and Market and Reference Data.