

Internship Notification Form, IIT Delhi

About Organisation

Name of Company:	Wells Fargo
Date of Establishment:	1852-03-18
Number of Employees:	194,000
Social Media Page Link:	www.wellsfargo.com
Website:	https://www.wellsfargo.com/
Type of Organization:	MNC (Foreign Origin)
Location of Head office:	San Francisco, California, United States
Nature of Business:	Finance & Consulting
Other nature(s) of business:	Other (Banking)

Internship Profile

Job Title:	QAP- Intern Analysts
Job Description:	<p>About Wells Fargo</p> <p>Wells Fargo & Company (NYSE: WFC) is a diversified, community-based financial services company with \$2.0 trillion in assets. Founded in 1852 and headquartered in San Francisco, Wells Fargo provides banking, insurance, investments, mortgage, and consumer and commercial finance through more than 8,500 locations, 13,000 ATMs, the internet (wellsfargo.com) and mobile banking, and has offices in 42 countries and territories to support customers who conduct business in the global economy. With approximately 273,000 team members, Wells Fargo serves one in three households in the United States. Wells Fargo & Company was ranked No. 25 on Fortune's 2017 rankings of America's largest corporations. Wells Fargo's vision is to satisfy our customers' financial needs and help them succeed financially. News, insights and perspectives from Wells Fargo are also available at Wells Fargo Stories.</p> <p>About Wells Fargo India & the Philippines</p> <p>Wells Fargo India & the Philippines (I&P) enables global talent capabilities for Wells Fargo Bank NA., by supporting Wells Fargo's business lines and staff functions across Technology, Business Services, Risk Services and Knowledge Services. I&P operates in Hyderabad, Bengaluru, and Chennai in India and in Manila, Philippines. Learn more about I&P at our International Careers website.</p>

About Quantitative Analytics Program (QAP)

The rotational Quantitative Analytics Program (QAP) is designed to provide you with the opportunity to gain comprehensive professional and industry experience that prepares you to develop, implement, calibrate, and validate various analytical models. Validating or developing models for different uses under the direction of experienced team members according to the track assigned:

The Capital Markets Track deals with the mathematical models for pricing, hedging and risking complex financial instruments. Wells Fargo trading portfolios include products in all traded asset classes such as credit, commodity, Equity, FX Rate, Mortgages, and Asset-Backed Finance.

The Risk Analytics & Decision Science Track deals with the statistical, econometric, and machine-learning/AI models for a variety of applications, including loss and revenue forecasting, credit decisions, financial crimes, fair lending, operational risks, and analysis of unstructured data such as text and audio.

Upon successful completion of the program, participants will be permanently placed in one of Wells Fargo's model development or model validation groups:

- Artificial Intelligence Machine Learning Model Development
- Traded Products Model Development
- Risk Modeling Group
- Market and Counterparty Risk Analytics
- Mortgage Model Development
- Corporate Model Risk
- Commercial Banking Model Development
- Consumer Modeling

About this Role:

Participates in a formal internship program with a duration of at least 2 months. Internship includes performing various assignments to become familiar with the organization and gain basic work experience. Work assignments are augmented by classroom training, self-study assignments, workshops, networking and/or other events.

The Modeling activities at Wells Fargo are organized into Centers of Excellence (CoEs). Corporate Model Risk is responsible for model validation or model risk assessment while other CoEs are responsible for model development.

1. Artificial Intelligence Machine Learning Model Development (Risk Analytics & Decision Science Track)
2. Commercial Banking Model Development (Risk Analytics & Decision Science Track)
3. Consumer Modeling (Risk Analytics & Decision Science Track)
4. Corporate Model Risk (Both Tracks)
5. Market and Counterparty Risk Analytics (Capital Markets Track)
6. Mortgage Model Development (Capital Markets Track)
7. Retail Investing & Financial Advice (Risk Analytics & Decision Science Track)

8. Risk Modeling Group (Risk Analytics & Decision Science Track)

9. Traded Products Model Development (Capital Markets Track)

1) Artificial Intelligence Machine Learning Model Development

The AI/ML CoE provides end to end development of AI Models and supports Enterprise Analytical platforms. The team provides Artificial Intelligence (AI), Machine Learning (ML) and Natural Language Processing (NLP) talent and expertise. The team partners with Wells Fargo business and enterprise teams to use AI to deliver new solutions, provide impactful insights, and reduce risk.

2) Commercial Banking Model Development

The Commercial Banking Model Development CoE is responsible for development, deployment, and risk management of all models involving the Commercial Bank and its customers. These include internally developed models using open source, proprietary, and third-party tools in a Hadoop or analytics lab environment as well as vendor models embedded in third-party solutions. Model applications include sales and marketing analytics, risk analytics, customer and digital experience analytics, data management, and intelligent automation.

3) Consumer Modeling

The Consumer Banking Model Development CoE team leverages machine learning and statistical techniques to develop predictive models to drive revenue and cost savings within Consumer and Small Business Banking and Consumer Lending. Areas of focus include targeting, personalization, fraud detection, lifetime value estimation, and operations, and model applications range from batch propensity models to time series forecasting to real-time bidding and optimization. The CoE has a strong focus on business outcomes and works closely with external partners to understand current problems and maximize impact of applied modeling.

4) Corporate Model Risk

The Corporate Model Risk (CMoR) CoE team is responsible for model risk assessment (or validation) of all models developed at Wells Fargo. These include more than 1,400 models in Risk Analytics & Decision Science as well as Capital Markets. The quantitative validation teams use sophisticated mathematical as well as statistical, machine learning, and NLP techniques to validate models developed by the modeling CoEs. The Advanced Technologies for Modeling team within CMoR conducts R&D of cutting-edge techniques and implementation in efficient algorithms.

5) Market and Counterparty Risk Analytics

The Market and Counterparty Risk Analytics (MCRA) CoE team develops, governs, and manages quantitative and qualitative models for the Market and Counterparty Risk Management (MCRM) organization. Market Risk Analytics models support the Corporate & Investment Banks traded products across the following asset classes: commodities, credit, equities, foreign exchange, rates and structured products. Counterparty Credit Risk Analytics develops models used for counterparty credit risk management and

limit monitoring, Comprehensive Capital Analysis and Review (CCAR) submissions, and counterparty portfolio stress testing. MCRA's model development activities use primarily C++, Python, and MATLAB.

6) Mortgage Model Development

The Mortgage Model Development CoE team develops risk models for all mortgage-related capital markets activities. We support Home Lending, Investment Portfolio, Treasury/ALM, Risk, and WFS Trading. We utilize various cutting-edge quantitative modeling techniques such as highdimensional Monte Carlo simulation, multi-factor interest term structure model within no-arbitrage framework, and time series analysis for forecasting mortgage prepayment behavior.

7) Retail Investing & Financial Advice

The Retail Investing and Financial Advice Modeling CoE team develops, implements, executes, and monitors all quantitative and qualitative models supporting the delivery of retail investment solutions, plans, and advice to our clients. Models include both internally developed and vendor solutions supporting: Retail customer financial planning applications; Financial plan implementation and execution; Generating capital market assumptions for retail applications; Generating tactical and strategic investment strategies for retail investors; Developing retail investment products; Surveillance of Financial Advisors and transactions.

8) Risk Modeling Group

The Risk Modeling Group team is responsible for development, deployment, and governance of the following model types:

- a. Credit loss forecasting models for the entire loan portfolio;
- b. Models to support Pre-Provision Net Revenue (PPNR) estimates including forecasting models;
- c. Recovery & Resolution Plan valuation models;
- d. Operational Risk models for use in regulatory capital estimation and CCAR (Comprehensive Capital Analysis and Review) processes;
- e. Compliance Risk models for Financial Crimes and Fair Lending;
- f. Credit Scoring and Decisioning models for commercial and retail portfolios. Modeling techniques used by RMG include statistical and econometric methods (e.g., regression, survival analysis, time series analysis), as well as applications of machine learning methods.

9) Traded Products Model Development

The Traded Products Model Development CoE team is responsible for developing models for pricing, hedging and official risk management. These models are used by various Wells Fargo trading desks. The CoE includes teams aligned with the various primary traded asset classes (Rates, Equities, Foreign Exchange, Commodities, Credit, Asset-Backed Finance), as well as horizontal teams supporting Credit and other Value Adjustments ("XVA"), the Core library, and regulatory/policy adherence. Beyond model development, the team also directly interacts with trading and sales teams by providing model use and calibration expertise.

Responsibilities

- Use Python, R, C++, SAS, SQL or other programming languages as well as mathematical/statistical packages for model development and validation.
- Perform mathematical model development and validation (risk assessment) under the direction of experienced team members.
- Produce required documentation to evidence model development or validation.
- Understand business needs and providing possible solutions through clear verbal and written communications to management and fellow team members.
- Stay up to speed on industry challenges and new and innovative modeling techniques used across Wells Fargo to solve business problems or enhance business capabilities.
- Participate in model related projects for varying purposes, methodologies, and relevant lines of business.

Required Qualification

- Minimum Masters/Ph.D. in a quantitative field such as applied math, statistics, engineering, physics, accounting, finance, economics, econometrics, computer sciences, or business/social and behavioral sciences with a quantitative emphasis.

Desired Qualifications

- Enrolled in a Master's or PhD program in: Statistics, Applied or Computational Mathematics, Computer Science, Economics, Physics, Quantitative Finance, Operations Research, Data Science, Engineering or related quantitative field or a related quantitative field
- Excellent computer programming skills and use of statistical software packages such as Python, R, SAS, SQL, Spark, Java, C/C#/C++ and Big Data platforms.
- Strong verbal, written communication, and interpersonal skills
- For the Capital Markets Track: Experience and demonstrated knowledge in mathematical and numerical methods including Monte Carlo methods, differential calculus, linear algebra, applied probability, statistics, Stochastic Calculus, Numerical Solutions to PDE/ODE/SDE and hands-on experience of working on quantitative finance research. Exposure to basic concepts specific to various asset classes (Rates, Foreign Exchange, Commodities, Equity, Credit) for financial derivatives will be an added advantage.
- For the Risk Analytics & Decision Science Track: Experience and demonstrated first-hand knowledge in several areas from analytical modelling, including, data analysis, statistical modeling, machine learning/AI models, data management, and computing. Specific topics/techniques relevant to this area include Multilinear regression, Error-correction models, GLM, Non-parametric regression methods, time series modeling, hypothesis testing, machine learning techniques (supervised/unsupervised), NLP, Bayesian/MCMC methods, Filtering methods (Kalman, etc.), Markov-Switching models, etc. Exposure to basics of Credit Risk, Scorecard Modelling framework, Macroeconomic Stress Testing, CRM analytics, Fraud Analytics, etc., would be an added advantage.

Expected No. of Hires:	-
Location(s)/Place of Posting/Online:	BLR/HYD/CHN
Skillset:	Refer JD
Minimum CGPA:	7
Students with backlog eligible:	No

Selection Process

Resume Shortlist:	Yes
Mode of Selection:	Hybrid
Resume shortlisting before test?:	Yes
Test:	Yes
Mode of Test:	Online
Test duration (minutes):	120
Aptitude/Psycometric:	No
Technical:	Yes
Group Discussion:	No
Personal Interview:	Yes
Technical Round:	Yes
HR Round:	Yes
Medical Test:	No

Eligible Academic Programs

Diversity Recruiting:	No
Eligible Years:	Graduating in 2026 (Pre-Final Year Students) - B.Tech / Dual / Master's
Eligible Departments:	B.Tech and M.Tech in Biochemical Engg & Biotechnology, B.Tech and M.Tech in Chemical Engineering, B.Tech and M.Tech in Computer Science & Engineering, B.Tech and M.Tech in Mathematics & Computing

Stipend Details

Stipend (per month) (In INR Per Month): 130,000 INR Per Month

Provision of PPO based on performance? Yes

Tentative CTC for PPO select: 35 LPA as of now INR Per Annum