

BLACKROCK® CAMPUS CAREERS

ABOUT BLACKROCK®

BlackRock was founded 28 years ago by eight entrepreneurs who wanted to start a very different company. One that combined the best of a financial leader and a technology pioneer. And one that focused many diverse views on a singular purpose: making a difference in the lives of the parents and grandparents, the doctors and teachers who entrust us with their money—and their futures—every day.

UNLOCKING TECHNOLOGY

ALADDIN CLIENT SERVICES

Use technology to solve some of the most complex problems in FinTech

Every day, the Aladdin Client Services Team tackles the hardest, most sophisticated problems in FinTech. We utilize our in-depth understanding of Aladdin®, our clients' businesses, and the investment management process to provide world-class customer service to our rapidly-growing, global client base. We all studied different disciplines and bring unique skills to the table, but we all share a serious passion for solving tough problems and keeping our clients happy.

NYC | LON | SF | PRI | HK | SI

PORTFOLIO ANALYTICS

Deliver financial analysis on securities and portfolios

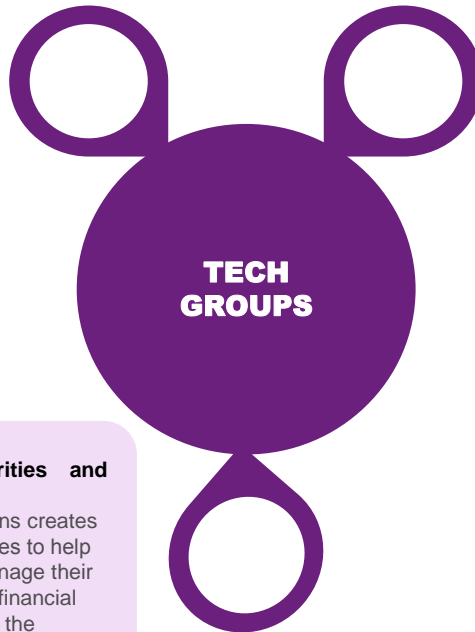
Portfolio Analytics within BlackRock Solutions creates and delivers Aladdin's® analytical capabilities to help the firm and our clients understand and manage their investments and risk. Our group leverages financial expertise, technical skills and knowledge of the investment process to implement scalable solutions. Analysts develop a comprehensive understanding of finance, clients, and technology; they learn to navigate all groups at BlackRock to solve business problems.

NYC | LON | SF | PRI | HK | SI

SOFTWARE ENGINEERING

At the heart of BlackRock is a world-class technology system called Aladdin®. It is an unmatched operating platform that unites all the information, people, and technology needed to manage money in real time and at every step in the investment process. Unlike other financial firms, technology at BlackRock is a profit center, not a support function, and stands on its own as a fast-growing business. Developers work in teams focused on specific components of Aladdin and use innovative new technologies to build solutions for BlackRock and many Aladdin® clients.

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KEY TASKS



DESIGN APPLICATIONS



BUILD MODELS



TRAIN & SUPPORT CLIENTS



ANALYZE PORTFOLIOS

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ABOUT ALADDIN:

- ▶ Aladdin® unifies BlackRock by providing a central technology platform that integrates our investment activities globally
- ▶ The system supports the full lifecycle of the investment management process, from quantitative risk management to order entry, trade routing, and settlement
- ▶ Aladdin® utilizes sophisticated web services and is built on application servers leveraging distributed systems and tied together by a real-time messaging system

AS AN ANALYST YOU WILL:

- ▶ Participate in four 6 month assignments on different teams during a two year rotational program
- ▶ Work closely with senior developers and managers on small teams that develop specific parts of the Aladdin platform
- ▶ Use cutting edge technologies such as Spark, Storm, Solr, Cassandra, Hadoop, Angular, React, iOS, and more
- ▶ Collaborate with colleagues to create innovative products during firm wide hackathons and test your investment knowledge during portfolio challenges

QUALITIES WE LOOK FOR:

- ▶ Students with strong academic backgrounds in Computer Science, Mathematics or Engineering
- ▶ Programming skills in languages such as Java, C++, Perl, Python or JavaScript
- ▶ Demonstrates critical thinking skills in applying technology towards solving business challenges
- ▶ Desire to drive large impact at an industry leading company and interest in working in a high performance environment

Engineering Innovations

Aladdin Data Warehouse

Designed and developed a scalable, high performance data warehouse using Cassandra, Spark, Parquet, and HDFS. The system allows clients to act as their own data scientists by performing ad hoc queries over enormous data sets consisting of both proprietary and Aladdin® data.

Real-time Market Data System

Leveraged Apache Storm to build a distributed, fault-tolerant platform to process streams of tens of millions of market data points for bonds and other financial instruments in real-time. The platform interacts with data stores such as Cassandra and Solr and uses machine learning algorithms to gain analytical insight into streaming data.

Predictive Mortgage Analysis

Created a distributed platform using Spark and Hadoop to analyze 1 billion loan-level mortgage observations growing at a rate of 25 million observations per month. Used machine learning algorithms on the entire data set to build a predictive model to identify whether a loan will default.

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OUR TEAM IS KNOWN FOR:

- ▶ **Problem solving:** We partner with investments, risk and client-facing teams to understand their business problems and provide creative solutions using Aladdin® analytics
- ▶ **Innovation:** We sit at the intersection of finance and technology. We conceptualize, design and implement new capabilities to ensure that Aladdin® remains the best platform for clients to understand and manage portfolios and risk
- ▶ **Centralized & scalable operating platform:** Aladdin® is a global investment platform that helps us solve problems in a scalable and efficient manner

AS AN ANALYST YOU WILL:

- ▶ Gain a broad understanding of **analytics, markets, and Aladdin's® capabilities**
- ▶ Utilize **analytical models, reports and large scale data processing tools** to help clients manage their portfolio risk, exposure and performance
- ▶ Perform **special analyses in response to market events**, new business needs and client needs
- ▶ Contribute to the **creating, testing and roll-out** of financial models, analytics and reporting for new security types and products
- ▶ Provide **rapid response tactical solutions** leveraging critical thinking, programming skills and creativity
- ▶ **Engineer processes and enhance tools** to deliver analytics and support BlackRock's Aladdin® technology infrastructure
- ▶ **Improve operational efficiencies** to enable scalable business growth

QUALITIES WE LOOK FOR:

- ▶ Demonstrated passion for capital markets and investment management
- ▶ Keen interest in critical thinking and applying technology to solve problems
- ▶ Ability to synthesize and articulate complex ideas
- ▶ Eagerness to master the underlying infrastructure, models and tools within BlackRock's Aladdin® system
- ▶ Interest in learning techniques such as statistical analysis (R, SAS, Matlab), data mining (Scala, Hadoop, Spark, SQL), web development (Javascript/AngularJS, HTML, CSS) or full scale enterprise application development (Java, C/C++, Python)
- ▶ Strong communication skills and ability to work well on cross-functional teams
- ▶ The ability to prioritize, multi-task and work independently
- ▶ Desire to gain a broad understanding of our industry and clients

Develop a Core Skillset

As an analyst in PAG you will develop expertise in four core areas that will serve as the foundation for your career:

- Financial Markets
- Clients/Industries
- Technology/Aladdin®
- Navigating BlackRock

Representative Projects

Retail Analytics Capabilities

Developed a platform to deliver Aladdin risk analytics and capabilities to financial advisors allowing them to build better portfolios for their clients.

Industry Peer Risk Analysis

Modelled suite of portfolios leveraging public data representing segments of the insurance industry. In depth analytics highlighted relevant trends enabling our client teams to deepen existing relationships and win new business.

Client Implementation

Designed and implemented an analytical framework for a new Value at Risk model to satisfy regional regulatory guidelines to successfully onboard a new Aladdin® client.

ECB Asset Quality Review

Partnered with the Financial Modeling Group to analyze portfolios of European banks using data processing technologies (Apache Hadoop, MapReduce).

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OUR TEAM IS KNOWN FOR:

We are product experts with a reputation for getting the job done. We..

- ▶ **Deliver** exceptional customer service to users, every time.
- ▶ **Solve** difficult problems by providing innovative solutions.
- ▶ **Collaborate** with others because we know we can do more together.
- ▶ **Figure** out what needs to get done and then do it.
- ▶ **Learn** every day, question everything, and embrace change.
- ▶ **Foster** a fun, innovative team atmosphere.

ACS has a long history of providing top talent to the Aladdin Business and broader BlackRock community – we are laser focused on giving Analysts the skills that they need for a successful career at BlackRock.

AS AN ANALYST YOU WILL:

- ▶ **Become an Aladdin Expert:** Our Analysts develop deep product expertise in a short amount of time. This translates into unparalleled ownership and senior exposure at early stages in their careers.
- ▶ **Answer questions and help our clients run their businesses on Aladdin:** You will take phone calls, emails, and chats from industry practitioners at some of the world's most respected investment institutions. You will solve problems that matter, making a direct, measurable difference to our clients. In the process, you will build technical, industry, and relationship skills.
- ▶ **Use technology to solve problems:** Regardless of your background, we will teach you the skills you need to succeed and understand our products. We will also give you fun, impactful opportunities to leverage the skills you have.
- ▶ **Educate users, leverage service insights, and relay user experience feedback to improve the customer experience and our product:** We believe that the best customer service is proactive, not reactive. We are students of our own data and engage with our clients to keep problems from arising, rather than dealing only with issues that are brought to our attention.
- ▶ **Work on a global team, with a local presence:** Our support model follows the sun – if a market is open somewhere in the world, so are we! You will get to work with teams across the world, while still engaging with a vibrant local team.

QUALITIES WE LOOK FOR:

- ▶ A passion for customer service and working with others
- ▶ A demonstrated love of technology
- ▶ Aptitude for problem solving and learning new concepts quickly
- ▶ A gritty, get-it-done approach to work
- ▶ Strong communication skills and a talent for teaching others
- ▶ Intellectual curiosity and an innovative mindset
- ▶ Patience, flexibility, and the ability to thrive in a fast-paced environment
- ▶ An interest in the financial markets

ALADDIN AT A GLANCE

The Aladdin Business is one of the fastest growing product businesses in FinTech:

- ▶ Over 500 members of the Aladdin Business
- ▶ Over 1,500 engineers dedicated to developing Aladdin

Aladdin is BlackRock's end-to-end investment platform. Just like the markets and users it services, it is complex and rapidly evolving:

- ▶ Home to over \$17 trillion in assets under management
- ▶ Nearly 200 unique clients
- ▶ A rapidly growing client base that includes close to 30,000 users
- ▶ Presence in over 50 countries

The clients you will work with include some of the world's most sophisticated asset managers, insurance companies, banks, treasuries, pension funds, and sovereign wealth funds