Senior Data Scientist

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The Senior Data Scientist plays a critical role in advancing Loyola University's analytic capacity by conducting advanced quantitative analyses, building scalable data pipelines and critical dashboards, and modeling based on high-level data science techniques. This role transforms complex datasets into actionable and strategic intelligence, develops predictive and exploratory models, and strengthens analytical capabilities across the organization. The Senior Data Scientist collaborates closely with technical teams, academic and administrative units, and senior leadership to drive data-informed decisions. The incumbent will report to Vice Provost, Institutional Research and will have a dotted-line reporting to Director for Reporting and Analytics.

Key Responsibilities:

1. Business Intelligence & Dashboards Development

- Develop and enhance dashboards, interactive tools, and analytic products that offer timely, meaningful insights for campus stakeholders.
- Partner with subject matter experts to translate analytic needs into well-designed data products and visualizations.

- Conduct usability testing and iterate on solutions to improve clarity, accessibility, and decision support value.
- Maintain semantic models and analytic layer structures in alignment with guidelines.

2. Advanced Analytics & Modeling

- Conduct exploratory and inferential analyses to identify trends, patterns, and drivers of outcomes in academic, financial, or operational data.
- Design and implement advanced predictive models to support institutional planning, student success, operational efficiency, and strategic initiatives.
- Validate, refine, and monitor model performance to ensure reliability, fairness, and reproducibility.
- Communicate modeling assumptions, methodologies, and implications clearly to non-technical audiences.
- Participate in institution-wide initiatives requiring rigorous analytic expertise (e.g., resource optimization, academic program review).

3. Data Engineering & Pipeline Development

- Build, optimize, and maintain robust data pipelines that support analytics, dashboards, and longitudinal reporting.
- Integrate diverse data sources — including institutional data, survey data, unstructured text, and external datasets — into scalable analytic environments via OIRA data warehouse.
- Collaborate with ITS and data governance teams to ensure adherence to metadata standards, data quality requirements, and security protocols.
- Support automation of recurring analyses and data workflows.
- Strengthen OIRA data warehousing integrating critical data components to streamline and advance dashboard development and data analysis.
- Standardize, clean, and validate data.
- Troubleshoot issues such as missing values, inconsistencies, or duplicate records

4. Collaboration, Consultation, & Capacity Building

- Serve as a collaborative thought partner to departments seeking to expand their analytical maturity.
- Cross-train OIRA's research analysts, supporting skill development in modeling, SQL coding, dashboard development, and analytical best practices.
- Contribute to a culture of transparency, responsible data use, continuous improvement, and team cohesiveness.
- Present findings to leadership in clear, compelling formats, using data storytelling and evidence-based recommendations.

Minimum Education and/or Work Experience

Master’s degree or doctorate in related field; 1-3 years’ experience in advanced quantitative data analysis required or a combination of Education and work experience.

Qualifications

- Advanced Proficiency with SQL and data warehouse environments.
- Proven ability to develop dashboards and visualizations in tools such as Power BI or Tableau.
- Demonstrated proficiency in leading-edge technical modeling, machine learning, or applied analytics.
- Strong programming skills in data manipulation language such as Python and/or R, including experience with libraries for modeling, visualization, and data manipulation.
- Strong communication skills, including the ability to explain technical concepts to non-technical stakeholders.
- Ability to manage multiple complex projects, meet deadlines, and work collaboratively across teams.
- Commitment to equity, data ethics, and responsible use of AI and advanced analytics.

Certificates/Credentials/Licenses

- Master’s degree in Data Science, Statistics, Computer Science, Information Systems, Mathematics, Economics, or a related quantitative discipline, Advanced Degree Preferred.
- Three or more years of experience in applied analytics, institutional research, data science, or equivalent roles involving advanced modeling, large-scale data analysis, and data visualization.

Computer Skills

- Advanced Proficiency with SQL and data warehouse environments.
- Proven ability to develop dashboards and visualizations in tools such as Power BI or Tableau.
- Demonstrated proficiency in leading-edge technical modeling, machine learning, or applied analytics.
- Strong programming skills in data manipulation language such as Python and/or R, including experience with libraries for modeling, visualization, and data manipulation.

Supervisory Responsibilities No

Required operation of university owned vehicles No

Does this position require direct animal or patient contact? No

Physical Demands None

Working Conditions None

Open Date 04/24/2026

Close Date

Position Maximum Salary or Hourly Rate $109,000/ann

Position Minimum Salary or Hourly Rate $97,000/ann

Special Instructions to Applicants

As a Jesuit, Catholic institution of higher education, we seek candidates who will contribute to our strategic plan to deliver a Transformative Education in the Jesuit tradition. To learn more about Loyola University Chicago's mission, candidates should consult our website at **www.luc.edu/mission/**. For information about the university's focus on transformative education, they should consult our website at **www.luc.edu/transformativeed**.

About Loyola University Chicago

Founded in 1870, Loyola University Chicago is one of the nation's largest Jesuit, Catholic universities, recognized for its academic excellence, commitment to community engagement, and leadership in sustainability. A Carnegie R1 research institution, Loyola leverages its status as one of an elite group of universities with the highest level of research activity to advance knowledge that serves communities and creates global impact. With **15 schools, colleges, and institutes**—including Business, Law, Medicine, Nursing, and Health Sciences—Loyola operates three primary campuses in the greater Chicago area and one in Rome, Italy, that provide students a transformative, globally connected learning experience. Consistently ranked among the nation's top universities by U.S. News & World Report, Loyola is a STARS Gold-rated institution that is ranked as one of the country's most sustainable campuses by The Princeton Review and has earned distinctions from AmeriCorps and the Carnegie Foundation for its longstanding record of service and community engagement. Guided by its Jesuit mission and commitment to caring for the whole person, Loyola educates ethical leaders who think critically, act with purpose, and strive to create a more just and sustainable world.

Loyola University Chicago strives to be an employer of choice by offering its staff and faculty a wide array of affordable, comprehensive, and competitive benefits. To view our benefits in detail, **click here**.

Loyola adheres to all applicable federal, state, and/or local civil rights laws and regulations prohibiting discrimination in private institutions of higher education. Please see the University's **Nondiscrimination Policy**.

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