# Daniel Nikolic

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**Cigna**
**Data & Analytics**

February 20, 2023

Dear Hiring Manager,

Thank you for considering my application for the Data Scientist position. I am eager to bring my expertise in data management and analysis, modeling, and econometrics to an environment dedicated to data-driven problem solving and to delivering high social and business impact. I am currently a senior data analyst with the Centers for Medicare & Medicaid's primary data analytics contractor, and my goal is to find an organization that is committed to fostering professional growth - a place I can stretch my current skills and develop entirely new ones - while improving the lives of many people. The data science vertical at Cigna is an ideal fit for me, because not only is it filled with innovative problem-solvers it also allows me to contribute to making better and more integrated healthcare services for a dizzying amount of people throughout the country. As a data scientist on your team I will use my skills and experience in technical analysis to consistently create value for the Data & Analytics team, its clients, and ultimately the individuals affected by the quality and sincerity of my work.

Through my current position at BlueLabs I have gained business-setting experience in conducting an outreach RCT, including the process of developing appropriate sampling frames, balancing groups for various treatments, and measuring outcomes across and within groups using modern ML methods popularized within the EconML package of tools. Through this position I have also gained expertise in navigating CMS data structures for a variety of use cases, most notably diving through claims data to analyze outcomes and behavioral patterns for preventive care users and non-users.

Another skillset I possess, which allows me to contribute significantly to your analytically-oriented team, is managing, analyzing, mining, and warehousing raw data. In my role as a research assistant at the Federal Reserve Board of Governors I was a primary contributor on the Federal Reserve Payments Study (FRPS), a leading source of payments statistics in the United States. Within this role, among many data responsibilities, I developed and automated a data validation model using R, VBA, and SQL. As a result of my work the FRPS is able to proactively monitor and, ultimately, correct thousands of reporting errors from financial institutions and payment networks every year. Not only did I work on this anomaly detection model but I also discovered the underlying problem on a vast subset of our data. I effectively communicated it to the project lead through data visualizations, which included a user-friendly SQL-connected Excel data workbook and R-generated reports of bank and payment network response issues including a Shiny app. In my role as a research assistant I also contributed to numerous economist-led research projects in a variety of ways: data scraping and warehousing, data visualization, technical writing and presenting, and statistical analysis.

As a research assistant tasks were often handed to me and my role was to execute at a high level, but much of my best work came about from thinking outside of those lines. For instance, a project studying a U.S. ATM market reached a dead-end due to unobserved out-of-network ATMs. I independently solved this missing data problem by developing a novel geospatial Python web crawler that scraped thousands of data points and millions of coordinates, revealing information that substantially expanded the project's scope and ability to form causal links. During my tenure I gained proficiency working on tasks like this in languages including R, Matlab, SQL, and Python. With my skills in statistical programming and data visualization, and my passion for problem-solving, I am confident I would be a great fit for the position.

Another skill I have is deftness in developing and executing models suited for applied analytical work. For the last 3 years of my time in an economics PhD program I studied pharmaceutical innovation, price regulation, and consumer access to drugs. Specifically, I focused on firm product design in the presence of value-based pricing; a topic which required me to model a drug market and utilize constrained optimization to derive analytical results across a wide variety of specifications. Through this project, as well as through coursework on simulations, structural economic modeling, and advanced econometrics, I honed my ability to construct models and use them for evaluation of research questions: an ability that is crucial for this position.

Beyond my work in academic research and statistical programming I have dedicated myself to being a mentor. During my time at the Board of Governors I trained over 40 internal employees including data analysts, financial analysts, and interns each year. The topics I covered were programming in R and econometric analysis using Monte Carlo simulations. Additionally, I had the privilege to create content, lecture, and mentor in the first four semesters of a course at Howard University designed to teach statistical programming and analysis to economics students. I carried that experience with me as I became a teaching assistant, and even instructor of my own econometrics course, at UNC these past 4 years. An instance of my mentorship, and appreciation for it, occurred last summer as I filled in for an economist as the supervisor of an undergraduate research project. Seeing the growth and success of former students/mentees is immensely fulfilling, and it is an attitude I will carry with me.

My experience, skills, and passion prove that I am a great fit for your open Data Scientist position. Please feel free to contact me anytime to further discuss my qualifications. I can be available via Zoom, phone, or email. Thank you again for your time and consideration.

Sincerely,

Daniel Nikolic