

**Allianz**

October 23, 2024

KÖNIGINSTRASSE 28 80802 MÜNCHEN

## Intern Quantitative Research & Data Science (f/m/d)

Dear Hiring Manager,

### **About Me**

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In my previous role as a Software Developer at Diomedes-technologies, a high-frequency trading firm, I improved my skills in scientific programming and data analysis. I successfully parsed and analysed large datasets using Python and SQL, developed statistical models to derive key metrics, and implemented automated processes to enhance data quality and efficiency.

Prior to that, I learned how to code by developing a website for medical school graduates in Romania to help them prepare for their final exams. I built the front-end using JavaScript and React (Material-UI) and developed the back-end with Azure Functions (C#) and SQL. Additionally, I integrated Stripe to handle the payment system. The front-end code can be found at: [https://github.com/rares1928/rezigo\\_v2](https://github.com/rares1928/rezigo_v2).

My academic background includes a Ph.D. in Mathematics from the Mathematics Institute of the Romanian Academy, where I specialised in spectral and algebraic methods in the study of differential manifolds. I also attended several machine learning seminars where I understood the density of functions created by neural networks (with architectures that can have either only one hidden layer or multiple hidden layers) in the set of continuous functions.

### **Why Allianz?**

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I am writing to express my interest in the Intern Quantitative Research & Data Science (f/m/d) position. My motivation comes from my willingness to solve real-world problems as well as my desire to constantly improve. With my background in mathematics and experience in software development, I am excited about the opportunity to work as a quantitative researcher for Allianz. I would love to put my problem-solving skills to the test by tackling challenges that arise in developing the Streamlit-based web application, optimizing language models, and enhancing quantitative analysis with cutting-edge research in AI.

### **Why Me?**

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My research experience has equipped me with strong statistical and problem-solving skills, while my previous role as a Software Developer provided hands-on experience in implementing my ideas and solutions. I am proficient in reading, understanding, and adapting ideas from the latest research papers. In a field that evolves as rapidly as software development, the ability to grasp and adapt to new breakthroughs is imperative. Additionally, my curiosity and passion for data analysis, combined with a fast-learning mindset, make me eager to tackle complex challenges in a high-performance environment.

Sincerely,

Rareş Anghel-Stan