

Investment Data Science Intern
AlphaCore Capital - La Jolla, California

Desired Skills

Statistical Data Analysis, Python, R and SQL a plus

Description

This position will use skills learned by students in a computer science, applied mathematics, or economics discipline. AlphaCore Technologies is a subsidiary of AlphaCore Capital, a La Jolla based Registered Investment Advisor and wealth manager. Please see www.myfactore.com for information about the application we are building and visit our website for more information about our firm. The Investment Data Science Intern will report to the Director of Research and will assist in the creation, improvement and analysis of risk factors in macro markets (stock indices, interest rates, commodities and currencies) as well in micro market structures (sectors, industries, etc). Depending on the skill set of the candidate, testing will involve both supervised and unsupervised machine learning algorithms.

Process will be:

1. Data Collection
2. Data Cleaning
3. Testing/Regression
4. Summary and detailed analysis of findings

Students here will have the opportunity to co-author a white paper that will be sent for potential publication at well-known academic and professional journals.

Knowledge and skills that we expect the intern will gain from the position:

- Understanding of how factors perform during various market environments and regimes
- Relation of market factors to more tangible concepts like investing in passive stocks and bonds
- Cleaning and parsing through practical datasets
- Co-authorship of a white paper

Andrew Zhen

March 5, 2018

AlphaCore Capital LLC
La Jolla, California

Dear Hiring Staff,

I wish to apply to the Investment Data Science Intern position at AlphaCore Capital. As a data science major, I possess a strong computer science background, having taken courses in algorithms, data structures, as well as object-oriented programming. My focus on data science is an indication of my substantial knowledge in mathematics and computational thinking.

Aside from proficiency in Java, I am also strong Python programmer. As a productivity tool for UCSD students, I created a responsive web application using Python, HTML, JavaScript, as well as the Flask framework to convert class schedules into a .ics file so that small details only need to be added once. Through my coursework, I have worked with statistical libraries such as NumPy for calculating mean squared errors and Pandas for illustrating regression lines.

This past summer, I completed an online data science course from Udemy in which I dealt with real-life data science exercises. From this experience alone, I learned how to go through the ETL process (Extracting, Transforming, and Loading) for data wrangling and cleaning, construct SQL queries to discover patterns as well as anomalies, and much more.

I would like to work at AlphaCore Capital because I feel that my skills are relevant towards the work being done. In addition, I would enjoy learning how intern responsibilities could further enhance my skills and translate to helping me develop into a better student. I hope to hear from you soon!

Best,

Andrew Zhen