

Cover Letter

Carson James

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Dear members of the hiring committee,

I am writing to apply for the ...? position at ...?. I am excited to potentially work in a collaborative environment to understand and use data at ...? to aid in increasing performance in this ever-changing world..

I received my masters in mathematics in May 2018 from Oklahoma State University from May 2018 to present, I have been helping Love without Boundaries, an international nonprofit that helps children, first by teaching English and writing reports, and presently by using their accounting data to help management gain insight into monthly performance.

I have experience with three languages: Python, C and SQL. I have used Python and C for various finance projects (see resume for project links) using several statistical and mathematical analysis techniques. Currently I work on two projects. The first is a stock price analysis project with the goal of identifying bull and sideways markets for stock and options trading. This project takes data gathered from the iextrading api and fits the time series to $(1, 1, 1)$ ARIMA models and filters the series to include only those with a positive mean when differenced. My second project is a credit risk modeling project that uses the data supplied by Lending-Club and groups the data by grade/subgrade to investigate an optimal investing strategy to optimizing some linear quantity like expected profit whilst adhering to some constraint like bounded number of contracts bought. Currently both are in the process of being rewritten.

I have a strong work ethic exhibited by my achievement in education. My undergraduate GPA is 3.929 and my graduate GPA is 4.0. The curriculum was rigorous and consisted of doctoral level mathematics classes for foundational material and research as well as advanced undergraduate and masters level statistics and probability classes (see resume for research links). In addition to being a strong work ethic, I am extremely attentive to detail. I resolve all problems in increments because in my experience, this method has a large payoff in terms of decreased stress and confusion. In mathematics, this means dissecting smaller, similar problems to recognize the underlying pattern then proving a result that generalizes to the case of interest. In programming this means testing each new function or structure against all others to ensure functionality and to eliminate time wasted on debugging larger code additions.

I believe that I would be a strong addition to the company that would be able to deliver insights into the data and work productively with other members of the team to achieve each goal.

Thank you for your time