809 9th Ave
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Justin Harris
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CAREER SYNOPSIS

- Dynamic professional with extensive and proven experience in data science, data engineering, hedge fund analytics, capital markets, and financial security valuation. Technology stack: Python, advanced SQL, JavaScript, Laravel, Flask, AWS, Ubuntu Linux, Windows Server, Nginx, HTML, and CSS.
- Previous accomplishments include: defined and implemented organizational data strategy for a mid-size hedge fund, backtested trading execution strategies for a mid-size hedge fund, developed an internal analytics dashboard for a mid-size hedge fund, mined forecast, sizing, and performance data to provide insights to a number of hedge funds ranging from $10 million to $12 billion, architected a SQL database and developed, using Python, an analytics product line for a financial technology firm, performed statistical research in Python using machine learning algorithms to model predictive measures of analyst forecasting, backtested financial investment strategies in Python, architected an ETL process for SEC 10-K and 10-Q XBRL data, implemented automation to reduce resource cost on manual processes.

PROFESSIONAL EXPERIENCE

Consultant/Lead Data Scientist   **Alpha Theory Advisors**   Nov 2017 to Present

Alpha Theory Advisors is a group comprised of front office consultants focusing on the investment process. Our specific niche is data science, portfolio construction, data engineering, and performance and risk reporting.

- Backtested an execution strategy that improved on actual results by 7.1% (ROIC basis) over a two-and-a-half-year period for a mid-size hedge fund.
- Defined and implemented an organizational data strategy allowing for process automation, data science capabilities, and better internal data flows for a mid-size hedge fund. The data warehouse was built in SQL Server and populated using ETL processes built in Python by pulling data from disparate vendor and market data systems.
- Compiled weekly data reports that helped drive investor letter dialog around volatile market movements.
- Worked with IR professionals to draft investor presentations, for data highlighting the hedge fund's competitive edge.
- Performed discovery sessions with all teams in a mid-size hedge fund, outputting a strategy document around technology, process, data, and performance reporting.
- Architected and developed a dynamic scorecard for a mid-size hedge fund, allowing users to run an analysis on any data dimension available in the portfolio. The development included data engineering, aggregating data across many vendors, and joining the data using a Python process. The product included both attribution and forecast analytics. Users could dynamically regenerate the dashboard selecting criteria on the following data dimensions: by custom sectors, by ticker tagging, by custom factor, by long or short, by alpha or non-alpha, by expected return range, or by public or private investments.

Data Scientist   **Alpha Theory**   Oct 2015 to Present

Alpha Theory is a financial technology firm engaged in portfolio optimization software development for the hedge fund industry.

- Architected and implemented a large-scale analytics data warehouse in SQL server, used to house client portfolio historical data and calculated analytic metrics. The data warehouse was built on a series of stored procedures with embedded quality assurance scripting for 100% production availability.
- Developed Python scripts for ETL, Reporting, Ad-Hoc querying and machine learning needs.
- Developed analytic product lines using SQL and Python (which included several dashboards related to portfolio analytics).
- Presented analytic insights to hedge fund clients related to fund attribution and analyst forecasting, designed to drive process and performance improvements.

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- Mined data, researched academic literature, and met with industry thought leaders to develop metrics which best measure analysts forecasting ability. This resulted in the development of the Alpha Theory Accuracy Score which extended work in academic literature for measuring forecast accuracy.
- Worked with internal teams to deliver ad-hoc analyses and automated dashboard reporting, surfacing business insights to drive improvements in sales processes, to drive client relations processes by building tools to measure client strength and to drive executive decision making.

Technical Director   **Aptaxle**   March 2017 to Oct 2018
Aptaxle is a technology consulting firm, working with companies to provide web, data and application development and analysis.

- Cofounded Aptaxle and built the business around development and web and data strategy.
- Architected and implemented data strategy for a large medical group in Laravel. By building migrations in Laravel, the client was able to ensure data integrity across all environments.
- Implemented the front and back end of a product company's web strategy. The company had over 20,000 products, meaning that both the backend ETL load and frontend access of the data had to be dynamic. The ETL process and development allowed for one template to govern each product group. The development of a filterable interactive product display in JavaScript enabled users to easily find the products they were looking for.
- Provided research and development services to a New York based data management company that services fortune 100 clients by providing access to high quality curated datasets.

Senior Analyst   **New Constructs**   May 2012 to Oct 2015
New Constructs is an independent equity research firm that develops and utilizes proprietary software for quality of earnings, forensic accounting, and discount cash flow valuation of 3000+ stocks, 7000+ Mutual Funds and 400+ ETFs.

- Developed scripts to test stock investment strategies, researching metrics using multiple linear regressions prior to using those metrics in a back-test model developed in R and SQL. The result of the research was a methodology that returned 33% compounded annually for the period 2002 – 2012 with a Sharpe ratio of 1.03 (the Sharpe ratio is an indicator of risk relative to the average return).
- Automated Analyst processes using R scripting with a SQL database connector to eliminate multiple process steps.
- Created a mapping system in conjunction with the engineering department to automatically source XBRL (an XML tagging system for financial reporting) data from the SEC to the NC system, eliminating the need to manually parse tagged line items, decreasing the time to build valuation models by 53%.
- Implemented a system to automate updates to company valuation models for data provided by companies on a quarterly basis. Prior to this implementation, models were updated on an annual basis only.

Analyst

- Effectively quantified the value of New Constructs' research for marketing purposes through the development of new metrics for calculating adjustments from GAAP to Economic Profit and DCF valuation using innovative SQL scripting and advanced data analytics.
- Coordinated efforts to identify and implement improvements to firm's proprietary valuation model including: identifying needed updates, recommending updates to upper management, communicating updates to System Engineers, and ensuring updates were correctly deployed.
- Developed and implemented a series of advanced SQL scripts, which standardized the workflow of Analysts, reduced reliance on Excel for analysis, and eliminated unnecessary procedures.
- Refined process for communicating system change requests by Analysts to Engineers improving efficiency through standardizing communication, reducing complexity, eliminating errors, and saving time and resources.

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- Assembled and presented monthly reports utilized by New Constructs' associated Novo hedge fund Managing Partner for investment decisions ensuring investment opportunities were presented in a concise, clear, and non-technical format.
- Effectively interacted with institutional and advisory clients gathering requirements for revisions to valuation reports.
- Improved the Novo hedge fund's investment review process by developing and implementing complex SQL scripting to replace Excel driven procedures, identifying new data points for review, and interfacing with data vendor to refine provided data sets.
- Demonstrated New Constructs' systems and valuation processes for institutional investors highlighting points of interests with valuation methodology behind investment recommendations.
- Developed SQL scripts for valuation reports that accommodated multiple company specific variables such as distortions to company valuation, comparative analysis of company rankings, and analysis of industry rankings.
- Researched the impact of including off balance sheet liabilities related to operating leases in financial statements. This research was submitted to the Financial Accounting Standards Board's Investment Advisory Committee for consideration of proposed Accounting Standards Update Topic 840.

Associate Analyst

- Responsible for the analysis and modeling of over 500 10-K's, building complex valuation models that were utilized by large institutional investor and financial advisors.
- Responsible for research related to Accounting Standards Updates, the impact of updates on New Construct's valuation methodology, and new data collection processes for accommodating updates in existing systems
- Refined SQL scripts calculating adjustments to earnings and assets reducing the SQL scripts size from 750 lines to 200 lines and time of execution from 30-60 minutes to 1-2 minutes.
- Led training class for new Associate Analysts instructing new hires in advanced financial statement analysis, valuation modeling by industry, and impacts of line item analysis on overall company valuation.
- Completed rigorous Associate Analyst training program covering corporate finance, valuation modeling, and systems training with top scores.

EDUCATION

Middle Tennessee State University
Murfreesboro, TN
Bachelor of Science in Economics, Minor in Mathematics
Graduated December 2011