Jason Ash

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Profile

Data scientist and actuary with advanced financial modeling, forecasting, and analytical expertise. Experience managing teams to monitor complex risk, operate financial hedging programs, improve operational and marketing processes, and develop and launch new business initiatives. Seeking to contribute to a team by identifying valuable strategic improvements using analytical and predictive models.

Professional Designations

Fellow of the Society of Actuaries (FSA), Corporate Finance and Enterprise Risk Management concentration — 2016

Chartered Enterprise Risk Analyst (CERA) — 2014

Member of the American Academy of Actuaries (MAAA) — 2013

An FSA is earned after passing eight rigorous exams (40% pass rate each) and completing additional E-learning courses and modules. Most candidates take 6-10 years of post-graduate self-study to finish.

Open Source

pyesg, Economic Scenario Generator for Python — 2019 - Present

pyesg is an open source stochastic scenario generator built for Python. Inspried by the scikit-learn API, users can create stochastic models, generate thousands of real-world or risk-neutral scenarios, or fit models with historical market data.

Publications

"Creative Landscape" — featured article in The Actuary magazine — 2017

"Bayesian Models in Insurance" — presenter at Predictive Analytics Symposium — 2019

"Improving Actuarial Communication" — presenter at Valuation Actuary Symposium — 2018

Personal blog — www.jtash.com — learned `html` and `css` to build a custom blog — 2017 - Present

Work Experience

Consultant at Ash Analytics

San Francisco, 2017 - Present

Ash Analytics provides actuarial and analytic consulting services to fintech and insurtech companies.

- Learn and manage all legal, financial, and administrative requirements to operate the company
- Built a public website for the business, as well as several landing pages to user-test business ideas
- Published articles and spoke at industry conferences

Head of Insurance and Analytics at Leaplife

San Francisco, 2017 - 2018

Leaplife is an insurtech startup backed by RGA, one of the largest reinsurance companies in the world. Leaplife is developing advanced models to improve life insurance distribution and product development.

- Built a data warehouse by querying APIs, organizing, and linking all company data for comprehensive analysis
  - Marketing data from Facebook ads manager, Google Adwords, Amazon advertising, and others
  - Customer data from CRM platforms Prosperworks and Hubspot
  - Website data from Google Analytics, Heap, and raw website logs
- Ran A/B & multivariate marketing tests; estimated success probabilities using Bayesian methods and implemented clustering algorithms to identify successful audience characteristics
- Defined, calculated, and analyzed trends in company marketing metrics to forecast sales and revenue
- Collaborated with reinsurance partner to define and implement a digital insurance API

Senior Investor Analytics Manager at LendingClub

San Francisco, 2016 - 2017

LendingClub was one of the first fintech peer-to-peer lenders. It offers personal loans through an online marketplace, which lowers interest rates for borrowers. It has provided more than $35 billion in loans since 2007.

- Winner, LendingClub Hackathon, April 2017 for implementing a hybrid gradient boosting tree/logistic regression machine learning model in Python to predict loan default. Outperformed investment returns on platform-wide portfolio by 2% annually.
- Extensive big data research, reporting predictive modeling, and visualization using Python
  - Analyzed historical forecast vs. actual loan default rates for report to the LendingClub Board of Directors
  - Evaluated statistical significance of client portfolio deviations from platform
  - Designed and implemented a report to track monthly portfolio investment metrics
- Improved onboarding experience for new clients by developing an analytical process to illustrate how loan purchase patterns could impact investment returns in new portfolios

Consulting Actuary at Milliman

Chicago, 2010 - 2016

Milliman Financial Risk Management provides institutional hedging and risk management services to insurance companies and asset managers. It currently manages $145 billion in assets.

- Managed a team of three to operate variable annuity dynamic hedging programs covering $10 billion in assets. Developed stochastic financial models to forecast complex cash flows; monitored all sources of risk on a daily basis; reported to client senior management and Boards of Directors.
- Led a team that launched three managed risk mutual funds with over $700 million in assets
- Led a team that developed an innovative financial planning application for iPad and web
- Actuarial consulting projects including valuing M&A transactions and developing investment strategies

Skills

- "An Excel wizard" - *colleague at LendingClub*
- Python: data analysis with `pandas` and `numpy`, machine learning with `scikit-learn`, data visualization with `matplotlib` and `altair`, probabilistic modeling with `scipy` and `pymc3`, and many API integrations
- Measuring advertising effectiveness by incorporating data from marketing and CRM products such as Facebook ads manager, Google Adwords and Analytics, Heap, and Hubspot
- Data collection, organization, storage, and schema design with Python and SQL
- Financial performance attribution and variance analysis, complex derivative pricing with Black Scholes and Monte Carlo methods, greek calculation, cash flow and reserve calculation for future liabilities
- Website development with `html`, `css`, and static site generators like `pelican` and `jinja2`
- Confident and enthusiastic public speaker; clear and effective communicator

Education

Northwestern University 2009

Bachelor of Arts, Mathematics

Contact

Email Phone LinkedIn Twitter Github