Robert D. West

Data Engineer · Python/Javascript Developer · US/UK Dual Citizen

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"A complex system that works is invariably found to have evolved from a simple system that worked."

Summary

I am a versatile and experienced **Senior Data Engineer**, a problem solver and a builder. I love to code, I love to mentor and teach. I love to design systems and projects. I have applied my skills across software engineering, analytics, data engineering, strategic planning, stakeholder relations, staff coaching and team development. I have proven success in finding simple solutions to complex data-centric problems to foster lasting prosperity.

Technical Skills

Languages:	Python, SQL, JavaScript, TypeScript, Clojure
Data:	Python (pandas/statsmodels/scikit-learn), Pipelines: Airflow/multiprocessing, DB: PostgreSQL
Web:	Front End: React, Redux, NextJS, Back End: NodeJs (Express), Python (Flask)
DevOps/Iac:	Familiar: Docker, Terraform, AWS/CFT
OS/Cloud:	OS: *nix/Windows, AWS: EC2, S3, RDS, Athena, Redshift
Tools:	Git/Github/Bitbucket, Atlassian Suite (confluence/Jira)
Eng Mgmt:	Lean Coffee, Familiar: Agile/Scrum

Experience

Signify Health   *New York, NY*

ENGINEERING MANAGER OF DATA WAREHOUSE   *Apr. 2021 - Nov. 2022*

- **Noteworthy Achievements**: Lead the successful migration of Manual Data Pipelines from the Analytics team and into a Robust Data Orchestration system (using Apache Airflow). This included creating a Docker development environment for all Devs. Creating the project workflow leveraging Jira and assigning all dev tasks. I also deployed the Airflow application itself via AWS. I ***Reduced monthly data processing time from 10 days to 2 days.***
- **Leadership**: Ensured all of my direct reports had a path for growth in both their technical skills and their professionalism. I always make myself available for anything from technical problem solving through to personal issues. I lead from the front, I want to understand the challenges my reports face and point them in the right direction to empower their problem solving skills.
- **Creative Problem Solver**: Built a Python/Flask Application to handle the deployment of code into the Apache Airflow system.
- **Communication & Collaboration**: I regularly needed to facilitate work that crossed multiple teams, using clear and concise written and verbal communication to ensure all relevant parties were able to do their job.

LEAD ANALYTICS ENGINEER   *Jan. 2019 - Apr 2021*

- **Noteworthy Achievements**: Successfully lead the migration of the Analytics PostgreSQL database from AWS single server to managed services (EC2 to RDS), including a Major Database Schema change. Provided ongoing management of both systems.
- **Mentorship**: Provided ongoing mentor-ship to junior analysts. Managed project work-flows leveraging Jira to create concise and logical project plan instructions for analysts. Lead periodic training sessions for analysts to improve their knowledge and competency in software development, using Python, Git, Conda.
- **Big Data Experience**: Built numerous ETL processes and data pipelines handling terabytes of data leveraging Python's multiprocessing library to process data quickly and efficiently. Familiarity with AWS EC2/S3 work environments.

ANALYTICS ENGINEER → SENIOR ANALYTICS ENGINEER   *Dec. 2014 - Dec 2018*

- **Full Data Life-cycle expertise**: Extensive experience analyzing large volumes of Medicare claims data across the full data life-cycle ranging from raw data delivery to generating partner reports. Including: data analysis, data aggregation, munging and visualization.
- **Noteworthy Achievements**: Developed and Productionized the Analytics department's original prototype dashboard that was delivered to all partners nationwide (Python: Data Aggregation, D3/Javascript front end).

Ernst & Young
New York, NY
SENIOR ASSOCIATE, COMPLEX SECURITIES & QUANTITATIVE ADVISORY
Feb. 2011 - Dec. 2014
- **Project Lead/ Model development**: Headed model development and programmatic implementation in numerous large scale analytics projects. Using Linear regression based pricing models. Working directly with clients to implement bespoke solutions.
- **Financial Modelling**: Expertise in modelling stock prices as Geometric Brownian Motion, leveraging Monte Carlo simulation, the use of lattice models and the development of analytical solutions to pricing problems.
- **Derivative Valuation**: Multiple years of experience in the valuation of complex derivative securities including institutional stock options, employee stock options (including suboptimal exercise behaviour), contingent considerations, restricted stock units, convertible bonds, callable bonds and other debt instruments.

Barclays Capital
Singapore
GLOBAL MARKETS INTERN, FX TRADING AND INVESTOR SOLUTIONS
Summer 2010
- **Forex Options Pricing Development**: Researched and identified the volatility premium for scheduled market events in foreign exchange options by computing realized volatility on historical data and identifying significant shocks during events.
- **Initiative**: Independently initiated the automation of sales data aggregation by developing a software solution and writing a usage protocol; saving the sales team at least an hour a day.

Sapient Global Markets
London, U.K
CONSULTANT
Jun. 2007 - Sep. 2008
- **Quality Control**: Confirmed trade bookings, resolved settlement breaks and negotiated changes to equity derivative confirmations in line with International Swaps and Derivatives Association (ISDA) regulations.
- **Market Knowledge**: Intermediary between counterparty and trading floor to ensure accurate execution of trade details. Products included equity swaps, equity options, and variance swaps.

Other Experience

Faim Crypto LLC (Fractal Artificial Intelligence Model)
New York, NY
SOFTWARE ENGINEER
Aug. 2017 - Aug. 2018
- **Software Engineering**: Implemented a machine learning algorithm in Python that predicts cryptocurrency, equity and ETF price movements, incorporating concurrent programming paradigms. I created a clean and user friendly Python package that can easily be used by Data Scientists and easily be extended to include other supervised learning capabilities
- **Portfolio Strategy testing and construction**: Implemented a back testing module that used a variety of goodness of fit measures to determine the algorithm's effectiveness. Integrated the signal with the Interactive Brokers paper trading environment. Created a simple interface that allowed an end user to monitor model performance and live paper trading success simultaneously.

Education

Carnegie Mellon University
Pittsburgh, PA
M.S. IN COMPUTATIONAL FINANCE (FINANCIAL ENGINEERING)
Dec. 2010
- Honours: MSCF Merit Scholarship · GRE Quant: 770/800
- The MSCF curriculum seamlessly integrates instruction in probability, statistical analysis, numerical methods, computation and simulation methods, stochastic processes, economics, and their application in today's quantitative financial markets.

University of Kent
Canterbury, U.K
B.S. IN MATHEMATICS
Jun. 2007
- First Class (4.0 U.S. GPA equivalent)
- Awarded Rotary Prize for graduating second in class
- Dissertation: Detailed enumeration of Latin Squares distinguishing characteristics and relationship to both combinatorial objects and group theory

Additional Information

Volunteering: Volunteer Data Expert for DataKind.org
Interests: Guitar, Health & Fitness, Meditation & Yoga (KRI Certified Kundalini Yoga Instructor)