James Vance

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Education:

ME, Systems Engineering   **University of Virginia**   **5/1/2014 – 4/15/2015**

Overall focus: Studied blend of operations research, systems engineering
Topics: Statistics, Data Mining, Probabilistic Theory, Applied Optimization, Risk Analysis, Stochastic Simulation
Honors: Member of INFORMS 'Omega Rho' Operations Research Honor Society

BA, English   **University of Kentucky**   **09/01/2006 – 12/1/2010**

Major Topics: Writing and editing, argument structure and reasoning
Supplemental (3.9 gpa):   Calc 1 - 3, Diff't Equations, Univ. Physics 1&2, Statistics, Bio 1&2, Anatomy/Phys, Cell Bio

Programming Languages: Python, SQL, Javascript, Java
Frameworks & Tools: Tensorflow/Keras, Pytorch, Spark, Flask, FastAPI, Docker, Kubernetes, Django
Certifications: AWS Certified Solutions Architect – Associate (2018)**,** CompTia Security+ 005 & CompTia Linux+ (2020)

Amazon

Machine Learning Engineer (High Volume Hiring)   **9/26/2022-Present**
Reason to Leave: Return to office mandate requires a cross-country move

- Overhauled existing data science models to add mlops orchestration - automated retraining, testing and deployment
- Led & launched greenfield schedule recommendation project matching job candidates to schedules deployed in multiple touchpoints (email, career site)
- Launched labor demand model service with region-based model customization
- Primary MLE responsible for 6 production data science / ml services

Compare.com

Machine Learning Engineer   **10/11/2021 -9/20/2022**
Reason to Leave: Internally shared financials showed company at high risk. They were acquired within 6 months
https://www.businesswire.com/news/home/20230306005418/en/Insurify-To-Acquire-Compare.com-Strengthening-Market-Leadership-Position-and-Empowering-Consumers-to-Find-and-Buy-the-Right-Insurance-For-Their-Needs

- Improved performance of vendor-generated customer routing model by 15%
- Developed greenfield ranking algorithm which drove a revenue uplift of $40k monthly (8%) over status quo
- Develop and deploy multiple model endpoints to optimize revenue on Compare.com
- Re-architected serving endpoints and optimized model latency to meet load requirements
- Implemented data drift logging and monitoring
- Responsible for project scoping and planning with business, and communicating requirements to tech partners

Alion Science & Technology

Associate Principal Data Scientist   **5/8/2020 – 10/10/2021**
- Lead team of data scientists to develop LSTM-based anomaly detection and rare event prediction application to catch training and simulation failures before they arise
- Develop and architect anomaly detection and issue classification models on time series network, machine and simulation system data in Tensorflow with Spark on Hadoop for data processing

- Responsible for end to end formulation, development and deployment of machine learning models
- Design user interface and data visualizations for routing server network and individual simulation programs
- Lead cross functional team of data scientists and software engineers on a data visualization and scorecarding tool for Navy training simulations. Architected db schema (Postgres), frontend (React), backend (Flask)

Marriott International

Data Scientist, Operations Research (Revenue Management)   **6/1/2019 – 5/8/2020**
- Collaborated to develop an improved forecast framework with substantial improvements over current, including modular components, better anomaly handling and model ensembling
- Provided analysis for previously opaque effect of Online Travel Agency pricing strategies to Revenue Mgmt VPs.
- Provided ongoing help in automation, documentation and back-analysis for entire One Yield pricing system preceding move from on-prem servers to AWS cloud and Apache Spark
- Led effort to successfully rewrite and refactor Marriott's Group Pricing Optimizer from SAS to Python for cloud

Sr. Manager, Advanced Data Science   **3/8/2018- 5/31/2019**
- Lead MI data scientist for "Customer Lifetime Value" project. Created multiple models for various use-cases including distribution channel measurement and marketing targeting. Developed internal future revenue model with 5% accuracy improvement over vendor. Led project from data gathering, model development, validation and stakeholder engagement.
- Presented Orchestration process and findings at Townhall event to highlight progress in new framework
- Lead MI data scientist for 'Project Pyramid', a high impact project that re-wrote Marriott's franchise fee structure for all 7000+ properties worldwide. Drove change from linear regression to constrained optimization problem and supported ongoing program changes with flexible Python scripts
- Conceptualized and created live business / leisure predictive model for Abandoned Search program using browsing session features
- Designed offers response models in Tensorflow and targeting optimization for promotions

Manager, Advanced Data Science   **5/18/2016 – 3/7/2018**
- Stood up a comprehensive control group strategy for Marketing Orchestration, including randomization and stratification criteria, operational sql queries, and IT/analytics/management roles and responsibilities
- Established novel measurement framework and testing plans for key Orchestration programs
- Established a measurement plan to handle unavoidable bias in certain KPI measurement
- Created automated incremental revenue and performance dashboarding using R language to access SQL, format and append data, and perform significance testing logic then export to Tableau

Sr. Professional – Business Process Reengineering   CSRA   **11/1/2015 – 5/17/2016**
- Introduced R Programming with leave-one-out validation for improved financial forecasting
- Analyzed cost savings and cost-benefits of pharmacy restriction initiatives
- Helped improve regular reporting through more efficient Microsoft Access and Excel operations
- Created ad-hoc analysis on fraud, waste and abuse

Sr. Business Analyst   Delivery Agent   **3/10/2015 – 10/31/2015**
- Created buyer segmentation analysis using clustering techniques for email targeting program
- Created warehouse staffing optimization model using linear programming and forecasting to supplement managerial decisions on staffing needs
- Developed KPI visualizations and automated reports using SQL, Tableau and IBM Cognose
- Performed financial forecasting in R using ARIMA and feedforward cross validation
- Collaborated with Sr Financial Analyst on ad-hoc profitability inquiries for product pricing structures

Sales Analytics Manager   Concordia Healthcare , USA   **08/01/2013 – 03/09/2015**
- Performed statistical data analysis for managerial decisions regarding sales targeting, including sales territory size, marketing strategies, and process optimizations using R Programming and Excel

- Developed coupon and discount pricing strategy using nonlinear programming for optimization and stochastic techniques. Oversaw successful implementation of the program on a $90mm a year product
- Managed sales analytics department, including 2 full-time employees and up to 9 temps.