James Horine

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PROFESSIONAL EXPERIENCE

BAYER   APRIL 2020 - PRESENT
Lead Applied Scientist
- Applied Science and Innovation Lead - Forecasting, GenAI, Machine Learning, Agroeconomics.
- Leads evaluation and engagement on multi-million dollar contracts.
- Developed and deployed Innovation Stream changing job expectations leading to 200% increase in new innovations that reach funding conversations on annual-basis.
- Developed and deployed employee strategies to reduce innovation cycle time from 6+ months to 4 weeks
- Lead multiple external POC programs delivering multiple models on time and under budget.
- Directed development of market share program improving existing market share research models by 10% and producing predictions 6+ months ahead of prior models.
- Lead multiple internal strategic cross functional programs leading to the development of novel GenerativeAI program for risk and the expansion of global crop simulator programs to multiple crops.
- Extensively leads scientific review in any data science stack.

Senior Scientist
- 2021 Bayer Top Performance Award Recipient
- Developed (*US20240119542A1*) ML algorithms improving accuracy of models by +50%
- Lead scientific research team to develop new and novel disease prediction data science capabilities
- Lead the integration of novel feature engineering to double model performance for sibling team
- Developed the scientific roadmap producing a 10x speed up in scientific throughput
- Extensively authored code in Python and R.

UNITED AIRLINES   MAY 2019 - APRIL 2020
Senior Manager of Data Science
- Lead team of senior and manager data scientists to deliver on 10+ program areas involving Contact Centers, Technical Operations, Social, Load Planning, Safety, and Supply Chain.
- Lead program team to deliver machine learning model for bag predictions saving $150000 in fuel overages
- Lead program team to deliver machine learning NLP model for customer complaint cases resulting in 50% reduction in case closure time while reducing outbound costs per case
- Extensively authored code in Python and R.

KPMG   NOV 2018 - FEB 2019
Manager of Data Science
- Lead team to deliver rapid analytics applications deployed to 50+ analysts
- Lead development team to deliver scalable high-speed machine learning forecasting software
- Managed the R&D capacities staffers to enable upskilling for 10 junior scientists
- Lead team-wide adoption of best software engineering practices reducing deployment time by 50%
- Served as SME for forecasting technology guiding multiple engagement managers
- Extensively authored, packaged, and deployed code in R server environments.

SITO MOBILE   FEB 2018 - NOV 2018
Senior Data Scientist
- Developed novel Brand Momentum Index to measure foot traffic at all locations for all major brands
- Developed novel geolocation total visits tracking analytics stack measuring unique visitors and unique visits
- Extensively developed code in Scala and Python

GENERAL ASSEMBLY   JUNE 2017 - OCTOBER 2018
Data Science Instructor
- Data Science instruction to classes of 25 students in a twice-weekly bootcamp format.
- 5 students earned >15% raises, 1 student admitted to University of Chicago, MSc. Data Science 2018.
- Delivered actionable feedback on students projects, guided professional growth, and advised on the current state of industry research and applications.
- Updated curriculum to fit relevant standards in python, machine learning, time series, forecasting, natural language processing, and GitHub.
- Taught exclusively in Python

THE MARKETING STORE   2017
Senior Data Scientist

CAPGEMINI   2016
Senior Consultant

SPIRALEDGE   2014-2016
Applied Data Scientist

EDUCATION

PENN STATE UNIVERSITY
Doctoral Program, Engineering
Doctoral Student - Financial Engineering, Agricultural Economics, and Systems Engineering

SAN JOSE STATE UNIVERSITY
Masters of Science, Statistics
Industrial research in non-parametric classification of high-frequency time series.

UNIVERSITY OF CALIFORNIA SANTA CRUZ
Bachelor of Arts, Mathematics
Algebra, number theory, analysis.

OPEN SOURCE SOFTWARE

- [fastFeatures](#) - R Library Developer - approximately correct feature selection in large feature spaces
- [tidyagronomy](#) - R Library Developer - scaleable modern data science ecosystem for agronomy

PATENTS AND PUBLICATIONS

- Patent Pending: US20240119542A: [Systems and methods for assessing crop damaging factors associated with agronomic fields](#)
- Working Paper: [TidyAgronomy](#) - on the need for scalable frameworks to lower the barrier for research and development in academic settings

TALKS AND LECTURES
- [Getting Started With Open Source](#) - Contributor
- Careers in Academic and Industrial Research - 2017 Panelist - [OSTEM](#)
- [A Crash Course in Time Series](#) - 2015 Saturday Invited Speaker - Galvanize SF