JAMES BARRON HILL

Jameshill2016@u.northwestern.edu | 580.678.2461
3770 Walnut St. | Denver, CO 80205

EDUCATION

Master of Science in Predictive Analytics, GPA 3.88, Northwestern University, Evanston, IL
Bachelor in Economics, University of Oklahoma, Norman, OK

SKILL SET

- **Advanced Data Science:** Python (pandas, numpy, scikit-learn, statsmodels, etc), SQL, R, statistical analysis, machine learning
- **Machine Learning System Design:** Problem definition, data collection, feature engineering, model training, model selection, evaluation, deployment, monitoring, metric selection.
- **Financial Markets:** SIE Certified, Bloomberg Terminal, Bloomberg Market Certifications.
- **Data Engineering:** ETL/ELT processes, data pipeline development, Oracle, PostgreSQL, RedShift, S3, NoSQL with Elasticsearch
- **Analytics & Visualization:** Customer segmentation, A/B testing, multivariate experiments, dashboarding (Tableau, Power BI), causality and Design of Experiments (DOE)
- **Deep Learning:** TensorFlow, Pytorch, NLP, Attention Models, CNN, Edge Device Deployment
- **Business Intelligence:** Revenue optimization, product analytics, marketing analytics, user behavior analysis
- **Product Management:** Agile methodologies, Jira, Aha, Figma, Lucid Chart, Confluence, Scrum, cross-functional team leadership, stakeholder communication (both technical and non-technical audiences), product sense and business sense

EXPERIENCE

Barron LLC, Machine Learning Engineer/Data Science Consultant Mar. 2023- Current   Denver, CO

- Optimized product rankings by 480%+, boosting 250+ product listings and reducing SEO expenditure by $1000-5000 through AI-driven strategies.
- Developed Python tools integrating LLMs to automate content optimization, improving SEO performance and user engagement.
- Conceptualized large-scale optimization solutions incorporating IoT and ML for warehouse operations, demonstrating strategic thinking in identifying data-driven opportunities.

AI Product Manager – Machine Learning Eng., Smart Warehousing Feb. 2022- Mar. 2023   Kansas City, MO

- Managed 3 Lead Data Scientist directing their work for product discovery and development of machine learning products and features utilizing python, SQL, jupyter lab, and AWS SageMaker.
- Developed, as a machine learning engineer, a warehouse product storage optimizer, utilizing unsupervised machine learning algorithms, reducing years-long manual configuration to minutes.
- Directed the development of 39 warehouse network optimization to optimize on-time delivery and shipping cost, utilizing machine learning hierarchical clustering algorithms, and coaching the data science team.
- Headed daily stand ups, backlog refinement, story building, and retrospectives with scrum master, DEVOps team, architecture, designers, and stakeholders, to develop AI features and sprints for the MVP.
- Researched product development including replenishment forecasting & cost optimization, open order ranking to optimize labor to handling, and warehouse product placement recommendations.

- Partnered with stakeholders from c-suit, directors, managers and warehouse employees to develop long-term roadmap in Aha, develop epics and stories in Jira, design architecture diagrams in Lucid Chart, and teams with designers in Figma to develop wireframes and prototypes.

Data Scientist III – Machine Learning Product Developer, CAES, Jan. 2019– Feb. 2022   Colorado. Springs, CO

- Planned with engineers, engineer managers, product managers, the director of sales on building an FPGA that integrates into satellite systems, with considerations of inference time, latency, memory usage, etc.
- Tested embedding neural networks into microcontrollers and edge devices using quantization, pruning, and weight clustering, while considering model accuracy.
- Handled multiple roles including Data Scientist, Data Engineer, Product Manager/Owner, and Backend/Frontend Developer to build a data science infrastructure, including data storage, processing, modeling, and deployment.
- Spearheaded partnerships with C-Suite executives, directors, managers to identify revenue-driving and cost-reducing solutions, by advising one-on-one and lunch learns over data science and machine learning.
- Engineered ETL/ELT processes as a data engineer, facilitating data migration from production Oracle databases to data science/product Postgres databases, enabling development of advanced analytics and machine learning models.
- Built a tri-level manufacturing completion system utilizing various machine learning algorithms to predict product overall manufacturing completion, area completion, and workbench completion time.
- Architected a Data Mart serving over 100 engineers, ETL pipelines and user interface for instant data access, slashing data request times from weeks to seconds.
- Supported the sale of over $10 million in excess inventory to distributors by building ensemble time series forecasting models to forecast inventory burn-down rate over a 2-year period for 200+ products.

Data Scientist, Sickweather, Mar. 2018 – Nov. 2018   Kansas City, MO
- Utilized time series forecasting models to forecast illnesses from social media post at a regional level, deploying time series forecasting models in AWS and visualized forecast with R Shiny Dashboards.
- Conducted exploratory analysis, feature engineering, model selection and optimization for CDC Regions, States, and Direct Marketing Areas (DMAs)
- Conceived and won a phase I Air Force SBIR Grant to build a sickness reporting app as the Principal Investigator.

Real Estate Investor Advisor, Chartwell LLC Mar. 2014 – Mar. 2016   Kansas City, MO

- Developed marketing content, personal brand, and sales scripts with strategic messaging, building a client base of over 500 individuals in 3 months by integrating MailChimp, CRMs, and social media.

Quality Team Manager, Honeywell Aerospace, May 2012 – Jun. 2014   Kansas City, MO
- Directly supervised 18 associates and managed 2 quality departments.
- Collaborated with c-suit, managers, supervisors and labor union leaders to ensure continuous operations of both departments while removing any blockers.
- Implemented lean six sigma and 5s procedures to improve quality of inspection, operations and planning.
- Led daily standup to prioritize work, discuss the weekly and monthly roadmap of work, discuss blockers and most importantly recognize employee's work.

U.S. Army Field Artillery Officer, Jul. 2005-2012   South Korea, Ft. Sill, Zabul Afghanistan, Fort Carson
- Leveraged expertise in artillery and air operations to mentor junior officers and serve as a senior advisor, enhancing analytical skills, fire support coordination, and operational effectiveness across U.S. Army, Marine, and allied forces.
- Orchestrated complex military operations, from managing an artillery company's training and support missions to coordinating multinational exercises, demonstrating adaptability across diverse operational environments
- Spearheaded critical advising and mentoring roles, including:

- o Leading cross-cultural teams to coordinate U.S.-South Korean Army operations
- o Embedding with the Afghan Army to modernize organizational structures
- o Advising light infantry Battalion Commanders on comprehensive fire support strategies

CERTIFICATES & TRAINING

Deep Learning
Natural Language Processing (NLP) & LLM Development
- Pretraining LLMs and Finetuning LLMs – July 2024
- Natural Language Processing Specialization, DeepLearning.AI - July 2024
- Natural Language Processing with Attention Models, DeepLearning.AI - July 2024

General Deep Learning
- Deep Learning Specialization, DeepLearning.AI - April 2020
- TensorFlow Developer Specialization, DeepLearning.AI - July 2020
- TensorFlow: Data and Deployment, DeepLearning.AI - July 2020

Finance and Financial Data Science
- Securities Industry Essentials, FINRA - December 2023
- Bloomberg Finance Fundamentals Certificate (Bloomberg Platform), Bloomberg - February 2024
- Bloomberg Market Concepts Certificate (Bloomberg Platform), Bloomberg - April 2024
- Introduction to Financial Engineering and Risk Management, Columbia University - January 2024
- Investment Management with Python and Machine Learning, EDHEC Business School - August 2020
- Machine Learning for Trading, Google Cloud & New York Institute of Finance - August 2020

Database and Data Management
- PostgreSQL, University of Michigan - October 2021
- Database Architecture, Scale, and NoSQL with Elasticsearch, University of Michigan - October 2021
- Big Data Modeling and Management Systems, University of California San Diego - September 2020

Blockchain
- Blockchain Basics, University at Buffalo - November 2021

Additional Information:
GitHub Projects and Training: https://github.com/DS-Jay
LinkedIn: https://www.linkedin.com/in/james-hill-0a437326/