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Itsi Weinstock

Data Scientist | Machine Learning Engineer

itsiweinstock.com
linked-in

Specialties	Optimization, Experimental Design, LLM Agents, Bayesian Methods, Mathematical & Statistical Modeling
Languages	Python, SQL, Julia, R
Frameworks	PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, Dask, Numba, Ax/BoTorch (Bayesian Optimization)
Tools/DevOps	Git, Linux, AWS, GCP, CI/CD, Docker, MLOps, Airflow, Dagster, Jupyter Notebooks

EXPERIENCE

Machine Learning Engineer

Nov 2024 — Current

CloudTrucks (Truck Logistics & AI)

San Francisco Bay Area, CA

- I lead AI design strategy and implementation for our flagship Voice AI Dispatcher product and set company-wide processes; including designing agents and tools, developing in-house evaluation and optimization platform, and selecting and setting up 3rd party tools.
- Building our in-house evaluation framework, including human evals, llm-as-a-judge, judge calibration to gold sets, latency for voice AI components, and live monitoring on production data; allowing for optimization and A/B testing.
- Building our AI optimization platform, with async parallelized generation of synthetic conversations, synthetic (LLM based) tool call results to mock production data, and evals to optimize prompts, model selection and configuration, and tool calling behavior.

Head of Data Science

Mar 2022 — Sep 2024

Climax Foods (AI Plant-Based R&D + CPG)

San Francisco Bay Area, CA

- Directed company-wide novel DS experimental design approach to food formulation, applying Bayesian optimization and ML techniques to reduce R&D and Product Development time and resource usage by 60% and improve product outcomes by 30%.
- Led an international collaboration to reformulate plant-based Mini Babybel ([link](#)) with ML techniques, coordinating 20 scientists, engineers and technicians in developing models, generating prototypes, developing assays, and conducting measurements.
- Built data models, pipelines, and web apps to automate instrumentation data capture and manage prototyping and scientific instrument workflows, cutting data collection resources by 50% while increasing company-wide data capture 10x.

Data Scientist

Aug 2021 — Jan 2022

Fireball Information Technologies (Computer Vision Wildfire Detection)

New York, NY

- Architected deep learning computer vision models, pipelines and data curation strategies wildfire detection system to reducing both false negatives and false positives in a live, critical system.
- Trained and productionized semantic segmentation models with transfer learning, applying state of the art research across model architecture, training methods, and hyperparameter optimization.

Quantitative Researcher

Jul 2020 — Aug 2021

Akuna Capital (High-Frequency Trading)

Sydney, Australia

- Performed large-scale optimizations of trading algorithm parameterization, designing fitness functions, backtesting over years of time-series data, and using ML-based experimental design to improve profits by 20% across Hong Kong, Korean, and Crypto markets.
- Developed a machine learning classifier trade filter that eliminated 10% of poor trades while maintaining high throughput.
- Productionizing ad-hoc research models into continuous automated daily runs, resulting in 14x more frequent updates.
- Refactored local pandas-based data analysis on 20+ TBs to efficient pipelines using Dask distributed parallelizations over a 500+ node AWS cluster, reducing iteration time from 4 hours to 10 minutes, and increasing look-back from 1 month to 2 years.

Blockchain Graph Structure Research

Jul 2018 — Oct 2019

University of Melbourne

Melbourne, Australia

- Research and novel Machine Learning technique development on inference of the topology of the peer-to-peer network underlying Bitcoin; and its implications into Bitcoin's pseudonymity properties.
- Published *The Bitcoin P2P Network Topology: a Review of Inference Techniques and Machine Learning Approach* available [here](#).

SIDE PROJECTS

Co-founder

Mar 2020 — Current

Couchers.org (Free couch surfing social network)

San Francisco Bay Area, CA

- Running an open-source couch surfing platform to out-compete legacy companies and improve outcomes for over 50,000 users.
- Forming a 501(c)(3) nonprofit organization, creating and executing global strategy for internal workflow and external growth.
- Recruiting and managing team leads in fields including software development, marketing, UI/UX and graphic design.

EDUCATION

Master of Science (Mathematics & Statistics) — Statistics, Operations Research, and Applied Probability

University of Melbourne

Bachelor of Science (Mathematics & Statistics) — Applied Mathematics and Operations Research

University of Melbourne