Wyatt Walsh

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Education

BS | Industrial Engineering and Operations Research
High School Diploma

UC Berkeley | August 2021
The Hotchkiss School | May 2014

Experience

Decentralized Application Architect and Engineer
Stealth NFT DeFi DAO | March 2022 - July 2022

- Organizational point person for protocol user interface (front-end) operations, implementation, validation, and deployment
- Leveraged agile project management methods JIRA to ensure maximally synergetic support of junior developers
- Utilized skills across the Web3 development spectra including: TYPESCRIPT REACT REDUX , testing processes, and integrations

Founder
SandLabs | June 2021 - Present

- Learned and applied frontend/backend web development principles to build the SandLabs.co web application REACT
- Successfully secured Web3 grant funding from the Ocean Protocol to pursue projects within the ***BlockchainxData*** domain
- Partnered with cofounders from Duke to explore more complicated subdomains and realize higher entrepreneurial value

Demand Forecasting
Gap Inc. | January 2020 - May 2020

- Impacted numerous organizational divisions by using data science and analytics to improve demand forecasts by 5%-25%
- Instigated organizational change by formally presenting feasible action items for improving forecasts to company leaders
- Quickly processed 5+ years of time series data using relational databases MYSQL and distributed computing APACHESPARK

Course Staff — Data 8: Foundations of Data Science
UC Berkeley | January 2019 - December 2019

- Facilitated student development as a course staff tutor for the largest in-person data science course of 1600+ students
- Invigorated student interests with 75+ lectures on varying topics in statistics, programming , and analytics PYTHON
- Ensured course operations by hosting office hours, proctoring exams, grading assignments, and working with other staff

Intern
The Bar Method | June 2015 - August 2015

- Maximized future equity and fairness among franchisees by developing a franchise territory designation model
- Developed and extracted useful and necessary data for modeling by digitizing all currently existing franchise territories

Cofounder
Bot Systems | October 2014 - June 2015

- Learned some benefits of failure by bootstrapping a hardware startup from prototype creation through investor pitches
- After 20+ iterations created the first cellular operable drone complete with augmented reality and a 360° capture system

Personal Projects

Private High Frequency Algorithmic Cryptocurrency Trader

- Utilize open-source frameworks with personally developed trading algorithms for a variety of cryptos across multiple exchanges
- Deep learning methodologies utilized for forecasting and quasi-quantum algorithms used for portfolio optimization

Fully Automated Data Pipeline Using Free, Cloud-Based Solutions
kaggle.com/wyattowalsh/basketball

- Facilitated other's sports-analytics data projects by creating the most robust, open-source, NBA-related database SQLITE
- Ensured $0 capital overhead requirements by using free cloud computing GITHUB ACTIONS and dataset tools KAGGLE
- Enabled better testing, deployment, and expansion by using containerizing Python scripts as pipeline segments DOCKER

Machine Learning for NBA Game Attendance Prediction
github.com/wyattowalsh/NBA-attendance-prediction

- Optimized NBA stadium stakeholder's decision making by building a Python-based game attendance prediction tool
- Refined modeling with 10+ regression experiments resulting in a best error of 5% average stadium capacity SCIKITLEARN R

Regularized Linear Regression Deep Dive
github.com/wyattowalsh/regularized-regression-from-scratch

- Published 3 articles in *Towards Data Science* after a thorough investigation into underlying model optimization mathematics
- Open-sourced all project implementations, including Pathwise Coordinate Descent optimization and cross-validation NUMPY

Technical Skills

Programming Languages Python, SQL, R, Java, Matlab, HTML, CSS, Javascript, Typescript

Data

Collection	Visualization	Processing	Modeling	Deployment
Web scraping	Reporting	Pandas	ML	MLOps
APIs (REST)	Dashboards	Spark	NLP / CV	Airflow
Databases		Multiprocessing	Forecasting	Flask
		Kubernetes	Simulation	Cloud

Cloud Technologies Platforms (AWS, GCP, Azure), CI/CD (GH Actions, Travis CI)
Workflow Git, Linux, Shell Scripting, Virtual Environments, Virtual Machines, Jupyter Notebooks, Docker, Kubernetes, Testing
Optimization Tools AMPL, IBM CPLEX, Gurobi, PuLP, Metaheuristics, Reinforcement Learning
Miscellaneous 3D Modeling (Autodesk & Solidworks), Microsoft Office Suite, Advanced Typesetting, Web Development

Certificates

- IBM Data Science Professional Certificate — IBM | 02-2021

Publications

Towards Data Science

- Basics of Linear Regression Modeling and Ordinary Least Squares (OLS)
- Using Ridge Regression to Overcome Drawbacks of Ordinary Least Squares (OLS)
- Implementing Pathwise Coordinate Descent For The Lasso and The Elastic Net In Python Using NumPy