



Vivek Menon

TECHNICAL LEAD · AI RESEARCHER · BLOCKCHAIN ARCHITECT

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Summary

Data Lead driven by improving business performance through intelligent software. 5+ years in leading remote and live teams across multiple verticals, typically specializing across exploratory data analysis, machine learning, insight discovery, blockchain research, serverless architecture, big data management, & other experimental technologies. Also a fan of fractals, Vim, quantitative investing, cryptocurrencies & cats.

DATA

Python (NumPy, SciPy, Pandas, Matplotlib, Seaborn, Keras, TensorFlow, Jupyter, Edward, PyTorch), R (tidyr, dplyr, ggplot2), Julia (Gen, IJulia, JuMP.jl, GladFly.jl), SQL (PostgreSQL, MySQL, CloudSQL), NoSQL (MongoDB, DynamoDB, DataStore, GraphQL), Redis

DEVOPS

Google Cloud Platform (Compute, Cloud Functions, Cloud Run, PubSub, BigQuery), Amazon Web Services (EC2, Aurora, Redshift, Lambda, S3), Firebase (Functions, Firestore), Kubernetes (Docker, Shopify, Wordpress), Linux (Ubuntu, NixOS, Arch), Vagrant, CircleCI

DEVELOPMENT

Python (Django, Flask, Requests, Coconut, Hy), TypeScript (NodeJS, JQuery, Axios, Express, Lodash, Async.js, Request, PM2, Vue), Haskell (GHC, Stack), Shell (Bash, Zsh), CSS (Sass, Less), Git, HTML, Clojure (Aleph, Core.async), C++, LaTeX, Markdown, Microsoft Excel (VBA), Solidity, Vimscrip, Elisp

Experience

Lake Finance

Toronto, CA

FOUNDER & CTO

May 2018 - Aug. 2019

Started a 3 founder company with a mandate to engineer a practical set of globally relevant digital financial tools; built with AI, cloud, & blockchain technology, scaled up to 11+ strong through bootstrapping, open-source grants and consulting.

- Graduated from University of Toronto's inaugural Creative Destruction Lab (CDL) Blockchain-AI (BcAI) 18/19 stream, raising \$100K at 6%.
- Launched invite-only Beta of Lake Wealth, which provided AI-driven cryptocurrency portfolios for \$120K of user capital via daily predictions from an asynchronous set of GCP Compute, Cloud Functions, Cloud Run, Datastore, CloudSQL & BigQuery instances, to provide truly passive non-custodial investing.
- Wrote Hydra AI; a proprietary portfolio selection model in Python/Cython that applies price momenta, probability and genetics to hunt for alpha in any asset class with a price, by searching for conditional return and extreme volatility (black swan events), benchmarked and tested in digital and traditional markets
- Architected Lake Trade, an open source Decentralized Exchange (dEX) allowing Ethereum users to trade ERC-20 / ERC-721 assets using the 0xV2 Protocol. Provided at cost & zero fees for the Open-source community; raised \$100K grant from 0x Team to continue development in the blockchain and DeFi space.

Juniper Park \TBWA

Toronto, Canada

STRATEGIC DATA SCIENTIST

Nov. 2016 - Apr. 2018

Led the Toronto division of the global TBWA Digital Arts Network (DAN) and Apple's Media Arts Lab (MAL) by providing multi-platform analytics, end-to-end data solutions, & bespoke measurement strategies.

- Built materials across the TBWA Network to pitch & solve business problems for multiple global clients, including NFL, Nissan, Pfizer & Apple.
- Supervised a proprietary Adobe advertising stack for Capital Group / American Funds using the Adobe Marketing Cloud stack in order target investors & advisors and grow their \$1.3 Trillion AUM.
- Led a cross-departmental team in partnership with TBWA \CHIAT \DAY to focused on discovering creative applications of AI, focusing on artificially-generated creative content via Tensorflow Magenta.

JWT Mirum

Toronto, CA

DATA SCIENTIST

Jun. 2015 - Nov. 2016

Deployed analytical technologies for high volume clickstream analysis, developed data-powered strategies for customer segmentation, championed intellectual property acquisition, & led development teams.

- Built turnkey data solutions for new-to-market products such as Adidas (Avenue A), Campari (Baron Samedi), alongside mature brands like Montreal Canadiens (Club 1909) and Pfizer Centrum.
- Developed end-to-end data strategies for clients like McCain, Getty Images & UNICEF powering product recommendation engines via data pipelines, often requiring database architecture, executive KPI frameworks, predictive modeling via machine learning, insight visualization & reporting, and executional tactics.

Grip Ltd.

Toronto, Canada

DATA ANALYST

Jul. 2014 - Jun. 2015

Discovered, presented, and implemented data-centric strategies, with an objective to simplify objectives and tactics for local and international stakeholders.

- Wrote custom data-driven user tracking systems by leveraging DNS Servers, Omniture Analytics, & Google Analytics for the YUM Group (KFC, Pizza Hut, Taco Bell)
- Constructed an automated KPI target generation system that tested & rendered a family of ARIMA models bi-weekly for Honda & Acura Canada using live sampled web data.

Education

Udacity

NANODEGREE(S)

Member of some of the inaugural classes of the Nanodegree Program, as curated by Udacity, in partnership with IBM Watson, Amazon Alexa, Github, AT&T, OpenAI, & Google.

Apr. 2018 **Artificial Intelligence Nanodegree**, *sudokuAI, salesmanAI, nqueenAI, aslAI, pacmanAI, touristAI, faceAI, voiceAI* Mountain View, USA
Apr. 2018 **Web Development Nanodegree**, *linuxServer, itemCatalog, logAnalysis, movieTrailers, neighbourhoodMap* Mountain View, USA
Sep. 2017 **Deep Learning Nanodegree**, *introDL, cnnDL, rnnDL, lstmDL, qLearningDL, ganDL* Mountain View, USA

Sauder School of Business - University of British Columbia

B. COMMERCE, DOUBLE MAJOR IN FINANCE & MARKETING WITH A MINOR IN ECONOMICS

Graduated May '14 with a double specialization and minor with emphasis on financial engineering, marketing behavior, and multi-fractal analysis.

Research

Hydra AI: The Evolutionary Diversification Mechanism

AUTHOR

A proposed solution to the *Offline Cardinality Constrained Multi Period Selection Problem*, as described via a patent-pending multi-agent adversarial solution that merges evolutionary strategies with probabilistic AI.

TaaS as a Service: A Monte Carlo Simulation

AUTHOR

A simple simulation for Hootsuite to show the capabilities of the Monte Carlo model, as applied to traditional Software-as-a-Service metrics like LTV, CAC, MRR, & Churn, using an firm and a a programmatic Monte Carlo simulation for varying business conditions

Bitcoin Pricing & Volatility: A Multifractal Analysis

AUTHOR

Explored if cryptocurrencies exhibit fractal properties like over-dispersion, long memory and self-similarity, in partnership with the UBC Finance Department.

Certifications

BUSINESS

Jun. 2018 **Artificial Intelligence: Implications for Business Strategy**, MIT Sloan Executive Education Cambridge, USA
Nov. 2013 **Hootsuite Professional**, Hootsuite Vancouver, Canada
Sep. 2013 **Canadian Securities Course (CSC)**, Canadian Securities Institute Toronto, Canada

TECHNOLOGY

Aug. 2019 **Solutions Architect Associate**, Amazon Web Services Toronto, Canada
Aug. 2019 **Developer Associate**, Amazon Web Services Toronto, Canada
Aug. 2019 **SysOps Administrator Associate**, Amazon Web Services Toronto, Canada
Nov. 2014 **Web Analytics**, Google Toronto, Canada