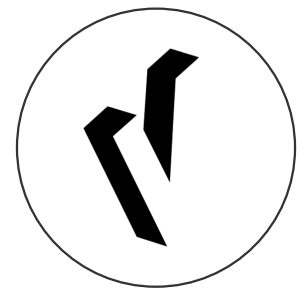# Vivek **Menon**

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, and 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**), NoSQL (**MongoDB, DynamoDB, DataStore, GraphQL**), Redis

DEVOPS Google Cloud Platform (**Compute, DataStore, CloudSQL, Cloud Functions, Cloud Run, PubSub, BigQuery**), Amazon Web Services (**EC2, Aurora, Redshift, DynamoDB, 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**), CSS (**Sass, Less**), Git, HTML, Clojure (**Aleph, Core.async**), Haskell, Bash, Lua, C++, LaTeX, Markdown, Microsoft Excel (**VBA**), Solidity, Vimscript, 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 technolog, 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) stream, raising $100K investment 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, and 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 0x V2 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 insights for high-level local and international stakeholders.

- 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

Sauder School of Business - University of British Columbia *Vancouver, Canada*

B. COMMERCE, DOUBLE MAJOR IN FINANCE & MARKETING WITH A MINOR IN ECONOMICS *September. 2010 - May. 2014*

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

Udacity *Mountain View, USA*

NANODEGREE *Jan. 2017 - Jan. 2018*

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

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

Research

Hydra AI: The Evolutionary Diversification Mechanism *Vancouver, Canada*

AUTHOR *May 2018*

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 *Vancouver, Canada*

AUTHOR *May 2018*

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 *Vancouver, Canada*

AUTHOR *Oct. 2013*

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*
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*