



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 leading remote and live teams in multiple verticals, typically specializing in exploratory data analysis, machine learning, insight discovery, blockchain research, serverless architecture, big data management, & other experimental technologies. Also a fan of fractal math, Vim, quantitative investing, and cats.

Data

Python (NumPy, SciPy, Pandas, Matplotlib, Seaborn, Keras, TensorFlow, Jupyter, Edward, PyTorch), R (tidy, 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, Messaging), Kubernetes (Docker, Shopify, Wordpress), Linux (CoreOS, Ubuntu, NixOS, Arch), Vagrant, Terraform, Jenkins, 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, Vimscrip, Elisp

Experience

Lake Finance

Toronto, CA

FOUNDER & CTO

2018 - 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 to scale 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), 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.
- Analyzed social user behavior for clients like TD, Walmart, Dairy Farmers of Canada using tools like Tableau, tidyR, Twitter Firehose, and Facebook GraphQL.
- Developed end-to-end data strategies for clients like McCain, Getty Images & UNICEF powering product recommendation engines via data pipelines, often re-quiring 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.

- Built an intelligent data-driven traffic tagging system by leveraging DNS tracking and custom Adobe Analytics, & Google Analytics plugins 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

Sauder School of Business - University of British Columbia

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

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

Vancouver, Canada

September. 2010 - May. 2014

Udacity

NANODEGREE

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

Mountain View, USA

Jan. 2017 - Jan. 2018

Apr. 2018 **Artificial Intelligence**, *sudokuAI, salesmanAI, nqueenAI, aslAI, pacmanAI, touristAI, faceAI, voiceAI*

Apr. 2018 **Web Development**, *linuxServer, itemCatalog, logAnalysis, movieTrailers, neighbourhoodMap*

Sep. 2017 **Deep Learning**, *introDL, cnnDL, rnnDL, lstmDL, qLearningDL, ganDL*

Mountain View, USA

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Mountain View, USA

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.

Vancouver, Canada

May 2018

Fractal Behavior in Bitcoin Pricing & Volatility

AUTHOR

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

Vancouver, Canada

Oct. 2013

Certifications

BUSINESS

Jun. 2018 **Artificial Intelligence: Implications for Business Strategy**, MIT Sloan Executive Education

Sep. 2013 **Canadian Securities Course (CSC)**, Canadian Securities Institute

Cambridge, USA

Toronto, Canada

TECHNOLOGY

Aug. 2019 **Solutions Architect Associate**, Amazon Web Services

Aug. 2019 **Developer Associate**, Amazon Web Services

Aug. 2019 **SysOps Administrator Associate**, Amazon Web Services

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