Vivek Menon

DATA SCIENTIST · FINANCIAL RESEARCHER · TECHNICAL LEAD

Toronto, Canada

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Summary

Data lead driven by solving business problems with intelligent software. 5+ years of leading remote & local teams to find data solutions across multiple verticals, typically specializing in exploratory data analysis, machine learning, blockchains, adtech, and/or serverless architecture. Also a fan of fractals, quantitative finance, functional programming, & cats.

DATA — Python (**NumPy, Scikit-Learn, Pandas, Matplotlib, Seaborn, Keras, TensorFlow, Jupyter, PyTorch**), R (**tidyr, dplyr, ggplot2**), Julia (**IJulia, GladFly.jl**), Matlab, Big Data (**PySpark, Hadoop, Redis, ETL**), SQL (**PostgreSQL, MySQL, CloudSQL**), NoSQL (**MongoDB, DynamoDB, DataStore**)

DEPLOYMENT — 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 (**Debian, Ubuntu, NixOS**), Vagrant, CI/CD (**TDD, Jenkins, CircleCI**)

DEVELOPMENT — Python (**Django, Flask, Requests, Coconut, Hy**), TypeScript (**NodeJS, Axios, Express, Lodash, Async.js, Request, PM2, Vue, REST/WebSocket API**), Haskell (**GHC, Stack**), Shell (**Bash, Zsh**), CSS (**Sass, Less**), Git, HTML, Clojure (**Aleph, Core.async**), LaTeX, Markdown, Microsoft Excel (**VBA**), Vimscript, Elisp

Experience

Kinesso
Toronto, CA

DIRECTOR, DATA STRATEGY — *Feb 2020 - Present*

Protoyped Kinesso Toronto, scaling a team of 2 with negative revenue pre-Covid to $500K in revenue, 30+ clients, and 5+ reports. Worked to develop new strategies to build, sell, and apply bespoke 3PD Audiences for clients and partners of the IPG Media holding group, including but not limited to Media Experts, Reprise, Universal Media, FCB, McCann, & Initiative.

- Tailored SoWs for NA and APAC clients like Amazon (Rufus), LEGO Canada, Sony Canada (Pictures, Music) & Nintendo Canada, yielding over 20K monthly in incremental data spend.
- Latest case studies with Addressable audiences (HVAs), in partnership with Nielsen, Acxiom Matterkind, have shown 4x new-to-brand RoAS, 1.5x CTR, & occasional 10% reductions in open market CPMs across platforms like DV360, Amazon Advertising, Facebook
- Led a skunkworks team to build and scale a Covid-19 response product to optimize ad outreach across clients, including the Government of Canada; reaching near 70% adoption across all clients.
- Won part of the Johnson & Johnson business as part of the UM Thrive project, helping bringing over $2MM in annual spend & beating Kinesso New York for client approval to use custom data products in NA

Lake Finance
Toronto, CA

FOUNDER & CTO — *May 2018 - Nov. 2019*

Exited a blockchain fintech startup with a mandate to engineer a practical set of financial tools for decentralized currencies; scaled to 11+ team and a $1.6M USD valuation through bootstrapping, open-source grants and consulting.

- Raised $100K at 6% (1.5MM valuation) from University of Toronto's inaugural Creative Destruction Lab (CDL) Blockchain-AI (BcAI) 18/19 incubator
- Launched invite-only beta ($120K over 200 users) of Lake Wealth, which provided AI-driven cryptocurrency portfolios via an asynchronous set of Google Cloud Compute, Cloud Run, Datastore, CloudSQL & other microservices, to provide passive non-custodial investing.
- Wrote Hydra AI; a proprietary portfolio selection engine in Python 3 that searches via price momenta & genetic algorithms to hunt for alpha in extreme volatility (black swan) events, converging in multi-threaded $\mathcal{O}(nlogn)$, benchmarked with paper trades and live capital.
- Architected Lake Trade, an open source fault-tolerant Decentralized Exchange (dEX) allowing Ethereum users to trade ERC-20 / ERC-721 assets using the 0x V2 Protocol. Provided at cost & 0 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, CA

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.

- Supervised a $2M Adobe Marketing Cloud stack for Capital Group / American Funds, optimizing analytics via human analysis and machine learning to convert investors & advisors and grow their $1.3 Trillion AUM.
- Led a 3 person cross-departmental team in partnership with TBWA\CHIAT\DAY focused on discovering creative applications of AI, including experiments with artificially-generated creative content via TensorFlow Magenta.

JWT Mirum
Toronto, CA

DATA SCIENTIST — *Jun. 2015 - Nov. 2016*

Developed end-to-end data strategies for clients like UNICEF, McCain, & Getty Images often requiring database architecture, executive KPI frameworks, predictive modeling via machine learning, insight visualization & reporting.

- Worked within adhoc teams alongside strategic, creative & developer personnel to parse and pitch RFPs; acquiring 70% of businesses pitched on average.

Education

Udacity   *Mountain View, USA*

NANODEGREE(S)   *September. 2017 - May. 2018*

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*
Apr. 2018 **Web Development Nanodegree**, *linuxServer, itemCatalog, logAnalysis, movieTrailers, neighbourhoodMap*
Sep. 2017 **Deep Learning Nanodegree**, *introDL, cnnDL, rnnDL, lstmDL, qLearningDL, ganDL*

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

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.

Research

Hydra AI: The Evolutionary Diversification Mechanism   *Toronto, CA*

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, CA*

AUTHOR   *Jun. 2014*

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, CA*

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

Sep. 2020 **CORe,** Harvard Business School Online   *Cambridge, USA*
Jun. 2018 **Artificial Intelligence: Implications for Business Strategy,** MIT Sloan Executive Education   *Cambridge, USA*
Nov. 2013 **Hootsuite Professional,** Hootsuite   *Vancouver, CA*
Sep. 2013 **Canadian Securities Course (CSC),** Canadian Securities Institute   *Toronto, CA*

TECHNOLOGY

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