Shawn Anderson, MSc.

Data Scientist

Extremely passionate computing scientist, machine learning specialist, experienced educator.

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WORK EXPERIENCE

Founder and Data Scientist
Longtail Financial

09/2018 – Present   *Nanaimo, BC, Canada*

LTF provides confidence to investors by providing systematically controlled investment strategies by taking a Big Data approach to automated trading.

Achievements/Tasks

- Designed, developed, and deployed Melange, a fully automated portfolio optimization system which achieved 20.2% ROI by executing 11337 trades in 197 days (6 months).
- Designed, developed, and deployed Disarb, a physical asset discount search and arbitrage engine.
- Provided token engineering consulting on the UBX ecosystem, a gold-backed currency to facilitate equitable commerce across the continent of Africa.
- Founded and bootstrapped a successful startup environment by recruiting and motivating passionate collaborators.

Data Scientist
First Green Bank Network

10/2019 – 02/2020   *Kelowna, BC, Canada*

FGBN provides continuous and interactive reporting and validation of large scale green projects in accordance with the Green Bond Principles.

Achievements/Tasks

- Produced the Green Bank Network Token (ERC-20) with fully compliant registration in the state of Wyoming.
- Modeled optimization systems applied to the flow of green capital between investors, projects, and communities.
- Designed an AI system that maps financial documents to a 17 dimensional latent space of Sustainable Development.

Teaching Assistant
Programming for Big Data II

01/2019 – 04/2019   *Burnaby, BC, Canada*

Simon Fraser University - Professional Master's in Computing Science

Achievements/Tasks

- Guided students in completion of their assignments and projects relating to data science, big data, machine learning, and data visualization.
- Personally mentored 28 students that focused on financial applications of big data for their capstone projects.

SKILLS

Python   Numpy   Pandas   SKLearn   PyViz

Algorithms   Machine Learning   Blockchain

Teaching   Writing   Communications   Finance

PROJECT EXAMPLES

State of the Art Reinforcement Learning and Evolution Strategy: A comparison of Scalability ⧉

Predicting Limb Movement Intention From EEG Signals ⧉

Instrument Recognition in African Music Field Recordings ⧉

EDUCATION

MSc. Computing Science
Simon Fraser University, Professional Masters in Big Data

09/2017 – 12/2018   *Burnaby, BC, Canada*

Courses

- Deep Learning
- Machine Learning
- Data Mining
- Data Visualization
- Big Data Systems
- Financial Data Science

BSc. Honors, Computing Science
University of Alberta

09/2011 – 04/2016   *Edmonton, AB, Canada*

Courses

- Reinforcement Learning
- Machine Learning
- Probabilistic Graphical Models
- AI in Gaming
- Competitive Programming
- Software Engineering

WORK EXPERIENCE

Data Scientist
Royal Bank of Canada Capital Markets

05/2018 – 08/2018   *Toronto, ON, Canada*

RBC is one of the largest banks in the world and the fifth largest in North America by market capitalization.

Achievements/Tasks

- Worked with a team of four as a lean-startup/agile/design thinking unit, vertically and horizontally across all of capital markets to reinvent how access management is performed.
- Used unsupervised learning techniques such as matrix factorization and tensor decomposition to reduce access management overhead by 90%.
- In some cases, reduced access control points for managers from the order of millions to the order of hundreds.
- Enabled easy identification of anomalous access points, saving the bank billions of dollars in potential losses from improper access, and millions of dollars in regulatory fines.
- Our team won 'Most Disruptive Internal Solution' at the 2019 Amp Expo, and our team was featured in the promotional video that was produced for the program that year.

Teaching Assistant
Implications of a Computerized Society

09/2017 – 12/2017   *Burnaby, BC, Canada*

Simon Fraser University - Computing Science

Achievements/Tasks

- An examination of social processes that are being automated and the dehumanizing and humanizing parts of systems, as well as, how systems can be designed to have a humanizing effect.
- This was a thrilling and rapidly educational experience where I got to co-create new curriculum along side Dr. Diana Cukeirman.
- Duties included participation in class discussions, hosting office hours, aiding in curriculum development, and marking assignments.

Software Development Contractor
Four Winds & Associates

08/2016 – 09/2019   *Edmonton, AB, Canada*

Four Winds is one of the longest running Indigenous consulting firms in Alberta. For over 20 years, they have been helping Indigenous communities and organizations achieve their social and economic goals.

Achievements/Tasks

- Built a Community Demographics database to be used by first nations communities across Canada to maintain data relating to members, employment, community programs, government relations, housing, and transportation.
- Web application development using Python, Django, JavaScript, HTML.

Junior Developer
Government of the Northwest Territories

05/2015 – 08/2015   *Yellowknife, NT, Canada*

Department of Justice

Achievements/Tasks

- Developed a back-end REST database interface that allows citizens to pay parking fines online.
- Backend developed in Scala with the Play Framework.

MEDIA APPEARANCES

Decentralized Banking is Possible
Bloom Living Podcast ⬈

05/2020   *Nanaimo, BC, Canada*

Imagining a New Financial Architecture
The Economics of Well-Being Podcast ⬈

03/2020   *Edmonton, AB, Canada*

Crypto Community Supports Paralyzed Entrepreneur
The Trader Cobb Show ⬈

12/2019   *International*

The Rise of The New World
The Future is Now - AIBC Summit Malta 2019 (EP 10) ⬈

11/2019   *Malta*

Artificial Intelligence in Crypto Markets
Blockgeeks.com ⬈

08/2019   *Toronto, ON, Canada*

RBC Amp Expo 2018 (Most Disruptive Solution)
Royal Bank of Canada ⬈

08/2018   *Toronto, ON, Canada*

Visualizing and Forecasting the Cryptocurrency Ecosystem
SFU Big Data ⬈

04/2018   *Burnaby, BC, Canada*

VOLUNTEER EXPERIENCE

VP Social
Undergraduate Association of Computing Science

2014 – 2015   *Edmonton, AB, Canada*

Youth Basketball Coach
Edmonton Youth Basketball Association

2013 – 2015   *Edmonton, AB, Canada*

Youth Basketball Coach
NWT High School Basketball

2007 – 2011   *Yellowknife, NT, Canada*

INTERESTS

Interactive Computing	Decentralization	Python
Reinforcement Learning	Computational Finance
Algorithms	Data Mining	Optimization	Rust