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https://sheldonfrith.com

Sheldon Frith – CV

Experience

Umny Inc.
Lead Software Developer
May 2021 – Present
- Lead all software development and related tasks (architecture decisions, AWS, sysadmin, database design, etc.)
- Build all Machine Learning models used in software (mostly deep neural networks) from end to end, including data generation, data collection, data processing, feature selection, model/algorithm selection, HPO, validation, testing, serialization and deployment.

Details on Software built for Umny Inc:

Geothermal Monitoring and Control Software
Allows user to monitor the state and sensor readings in their geothermal system, schedule and send control signals to control the operation of the system, built for Innovia GEO.

GeoPile Predictive Software
A geothermal system design and performance prediction suite, built for Innovia GEO

Soil Conductivity Predictor (Beta)
A public API and web app that uses ML to estimate the Thermal Conductivity of any soil based on its physical properties, which is more accurate than any existing method

Ground Temperature Predictor
A public API and web app that uses ML to predict the temperature below ground anywhere on earth, by date and depth, with less than 1 °C error margin in most locations

C++ end-to-end ML model creation and HPO framework
Comprehensive end-to-end ML model creation software, including custom HPO algorithms and meta-learning, designed to allow AutoML on edge devices

Custom ML Dataset Splitting Command Line Utility (Beta)
Creates more challenging data splits, using a smarter algorithm, than traditional methods, leading to more reliable model performance in the real world

Languages
Typescript + JS
C#
Python
C++
PHP

Back End
ASP.Net Core
MVC
Nest.js
Flask
Laravel

Front End
React
Next.js
CSS/SASS
styled-components
tailwindcss

Machine Learning
PyTorch
SKLearn
Optuna
GDAL
OsGEO

Databases
MySQL, SQLite
Relational Databases

Integrations
Stripe
Telegram
Shopify
Auth0
Cognito
Google Maps
ChatGPT

Sharp AR

Lead Software Developer

Sept 2020 – May 2021

-   Built a custom Shopify plugin/app to allow easier, more customizable Augmented Reality integration into stores.
-   Built an embeddable Augmented Reality service (built on Google's model-viewer) which could work in any website.

Personal Software Projects:

*I have been creating small software projects since the age of 14 (including whole applications built with excel VB macros, several react-based web apps, many websites, java console applications, etc). I provisioned my first AWS EC2 server and started using Linux about 10 years ago. A recent example side project of mine is a web app for testing the execution speed of various sorting algorithms comparing C++ Web Assembly to regular JavaScript (**https://sheldonfrith.com/wasm-speed-tester**).*

English Teacher

English with Tom & Lore
Medellin, Colombia 2023-present

-   Private tutor in business-focused and technical English, for Colombian professionals.

Front Desk

Construction and General Contracting
Caledon, ON, Canada 2019-2020

Fazenda Meats

Cofounder and Owner-Operator
Caledon, Ontario, Canada 2020

-   Produced grass fed goat meat.
-   Regenerative rotational grazing, using Holistic Management
-   Designed and built unique hands-free bottle-feeding system which is highly portable for a rotational on-pasture grazing situation.

Wandering Farm

Cofounder and Owner-Operator
Caledon, Ontario, Canada 2019

-   Produced organic vegetables.
-   Implemented many time-studies comparing various common, but conflicting, paradigms of vegetable production (different weeding techniques, planting techniques, harvesting techniques, etc.)

Buffalo Air Express

Equipment Operator, Driver, and Airplane Loader
Hay River, NT, Canada 2019

-   Trained new employees and ensured high-value and high-risk cargo was delivered on time

Northern Farm Training Institute

Holistic Management Supervisor
Hay River, NT, Canada 2016

-   Supervising and managing employees and volunteers, from various countries

- Managing regenerative livestock and vegetable production operation
- Developing course curriculum and teaching courses on food security, and regenerative agriculture in the far-north
- Writing grant applications and assisting with business planning

Author
Self Employed
Hamilton, ON, Canada 2015-2016
- Self published "Letter to a Vegetarian Nation"
- Contributing author to "Green Meat? Sustaining Eaters, Animals, and the Planet" published by McGill-Queen's University Press

B-C Ranch
Holistic Management Apprentice
Meadow Lake, SK, Canada 2015

Driftwood Landscaping
Landscaper
Victoria, BC, Canada 2014-2015

Makaria Farm
Greenhouse Manager
Duncan, BC, Canada 2014

Education

- Attended Camosun College, Social Work Program
- Completed Gaia College, Organic Master Gardener and Ecological Landscape Design Certificate Programs
- Attended OCAD University, Fine Arts, Sculpture and Installation
- Graduated Wellington Heights Secondary School, with Honors

Skills

I can tackle almost any part of a software project; however, I am specialized in the following:

- Deep Learning and Data Science that includes a geographic component and/or is related to geology/soil.
- Full stack web-app development (with a slight preference for back end) with Typescript, React, SQL/Relational database.

As a software developer, I pride myself on my exceptional work ethic. I have a demonstrated history of going above and beyond to achieve project goals and produce the best quality work, and I am happy to provide references from any of the positions I've held to prove that. Additionally I've been told I have excellent communication skills, when working as part of a team.

I am a native English speaker, but I also speak Spanish fluently.