

## WORK EXPERIENCE

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### OutageHub (CanadianPowerOutages.ca)

2024 - Present

*Founder and CEO*

- Built a real-time power outage aggregation platform and API for Canada, normalizing inconsistent utility feeds into one unified data model.
- Designed ingestion and validation pipelines to improve correctness and uptime under live outage conditions.
- Developed the outage map UI and partner-facing API workflows for operational and research use cases.

### G&K Software (Modernization Delivery)

2025 - Present

*Head of Sales*

- Drive pipeline and sales for modernization delivery work across carve-outs, integration layers, downstream data tooling, and testing support.
- Scope and qualify engagements by translating operational pain into small, executable first contracts with clear delivery boundaries.
- Support delivery planning by aligning requirements, interfaces, and validation workflows to reduce execution risk.

### Do Better Foundation

2026 - Present

*Cofounder*

- Cofounded a research + tooling effort focused on recurring public-sector execution failures (construction delays, procurement bottlenecks).
- Building workflows to collect messy public documents, normalize evidence, and surface root causes using applied LLM pipelines.
- Designed early architecture for document ingestion, extraction, and explainable synthesis outputs for practical use.

## RESEARCH

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### Hybrid Locomotion Research (NEAT + Imitation → DDPG)

Sept 2022 - June 2023

*Researcher*

- Built a two-stage locomotion pipeline that bootstrapped walking from human motion data, then fine-tuned with reinforcement learning for robustness.
- Extracted joint-angle trajectories using MediaPipe and mapped angle deltas into continuous control signals for imitation learning.
- Integrated the pretrained actor into a DDPG loop in OpenAI BipedalWalker and identified observation design as the main limiter to final performance.

### UTMIST Virtual Creatures (Evolution + PPO + Multi-Agent Coordination)

Sept 2023 - April 2024

*Lead Researcher*

- Led a simulation research project to evolve creature morphologies, train a universal locomotion policy, and enable coordination in a 2v2 soccer environment.
- Implemented a Karl Sims-inspired genetic algorithm to generate MuJoCo bodies and evolve movement-capable morphologies.
- Trained a shared PPO controller across multiple bodies and added a planning layer using Transformer heatmaps and MCTS self-play.

## PERSONAL PROJECTS

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### Bike Rebalance Simulator (Toronto Bike Share Optimization)

2026

*Builder*

- Built a simulator to forecast station shortages/surpluses and test rebalance interventions using real Bike Share Toronto trip logs.
- Implemented a bucketized day replay (15-min intervals) that converts trips into events and outputs station inventory trajectories.
- Clustered stations from hourly dep/arr fingerprints (48-D signatures) to support type-aware planning and optimization.

### Chess Engine (Hudson64)

2025

*Builder*

- Building a lightweight chess engine and in-browser sandbox focused on fast iteration and inspectable search behavior.
- Implemented a search + evaluation loop to explore candidate lines and choose moves from scored positions.
- Developed an analysis UI to play, test positions, and inspect alternative continuations for debugging.

## EDUCATION AND CERTIFICATES

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### University of Toronto (St. George)

2023 - Present

*B.A. Arts and Science — Cognitive Science & Computer Science coursework*

### Google Cloud Computing Foundations

Completed

*Certificate — Cloud infrastructure fundamentals*