

Jansen Nye

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EDUCATION

Brigham Young University

B.S. Computer Science, Machine Learning Emphasis — GPA 3.50 (major 3.62)

Expected April 2027

Provo, UT

RESEARCH EXPERIENCE

DRAGN Labs, Brigham Young University

Research Assistant (advisor: Dr. Nancy Fulda)

Jan 2026 – Present

Provo, UT

- Research instilling pro-social values in large language models to improve emotional responsiveness and value alignment.
- Implement PyTorch training pipelines that emulate biological neural mechanisms, such as mirror neurons, through modifications to the transformer architecture.
- Designed and executed end-to-end training of four novel 100M-parameter foundation language models; benchmarked fluency by bits-per-byte on five held-out corpora, with the broadest-trained model holding ≤ 1.55 BPB across all domains.

Human-Centered Machine Intelligence Lab, Brigham Young University

Research Assistant (advisor: Prof. Michael Goodrich)

Aug 2025 – Jan 2026

Provo, UT

- Simulated token-exchange games on real-world and theoretical networks to model poverty-mitigation strategies; designed eight network-rewiring approaches reducing Gini-coefficient inequality by up to 50% in simulation.
- Co-authored a research manuscript on the findings and presented the work at BYU's Student Research Conference (2026).

Department of Geological Sciences, Brigham Young University

Research Assistant (advisor: Prof. Barry Bickmore)

May 2024 – Sept 2025

Provo, UT

- Led development of GALOPER 2, a MATLAB application for simulating crystal growth and statistically evaluating results; presented at BYU's Student Research Conference (2025).
- Developed evidence for groundwater on Mars through statistical analysis of Martian “blueberry” datasets, supporting the aqueous-growth hypothesis for their formation; presented at the International Clay Conference (Dublin, 2025).

INDUSTRY EXPERIENCE

Adobe

May 2026 – Present

Software Engineer Intern

Lehi, UT

- Delivered an internal DORA-metrics dashboard integrated with internal Gauntlet services, giving engineering teams data-backed insight into standardized delivery performance.
- Built Python reporting endpoints for seven metrics, backed by MariaDB and connected to React/MUI X-Charts visualizations.
- Designed a context-engineering pipeline for a production LLM agent, cutting per-query context up to $\sim 500\times$ via deterministic evidence filtering while reducing hallucinations.

MANUSCRIPTS & PRESENTATIONS

- Co-authored research manuscript on network-rewiring strategies for poverty mitigation, with Prof. Michael Goodrich.
- *Statistical Analysis of Martian “Blueberry” Datasets* — International Clay Conference, Dublin, 2025.
- Token-exchange networks and poverty mitigation — BYU Student Research Conference, 2026.
- GALOPER 2: simulating crystal growth — BYU Student Research Conference, 2025.

PROJECTS

Deep Q-Network Chess Engine

github.com/JansenNye/QNetChessEngine

- Built a reinforcement-learning chess engine in PyTorch: Dueling Double DQN with a residual conv tower, experience replay, and legal-move masking over a 4,672-action space.
- Designed a curriculum training pipeline in a custom Gym-style environment, progressing from scripted opponents to self-play with reward shaping and ϵ -greedy exploration.

Arkonyx's Fantasy Football — Full-Stack Web App & Browser Extension

fantasyfb.net

- Built and deployed a fantasy football platform (TypeScript, React, Next.js, Tailwind, Supabase) with authentication, protected API routes, persistent draft state, and live NFL statistics.
- Developed a companion Chrome extension that syncs ESPN draft picks and settings via WebSockets and a REST API.

SKILLS

Languages: Python, Java, JavaScript, TypeScript, C/C++, MATLAB

Frameworks: PyTorch, React, Next.js, Node.js, Tailwind

Data & infrastructure: SQL, Kubernetes, MariaDB, PostgreSQL/Supabase, Jenkins, Git, Linux