

Jansen Nye

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EDUCATION

Brigham Young University

Bachelor of Science: Computer Science – Machine Learning Emphasis

GPA: 3.50 (Major: 3.62)

Expected April 2027

Provo, Utah

RESEARCH EXPERIENCE

DRAGN Labs, Brigham Young University

Computer Science Research Assistant

Jan 2026–Present

Provo, Utah

- Develop the MIRROR Pipeline, a full PyTorch pipeline for language model pretraining & instruction-tuning, aimed at improving pro-social value alignment and safety under Dr. Nancy Fulda
- Design and execute end-to-end training of four novel 100M-parameter foundation language models, benchmarking 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

Computer Science Research Assistant

Aug 2025–Jan 2026

Provo, Utah

- Simulated token-exchange games on real-world and theoretical networks to model poverty-mitigation strategies under Prof. Michael Goodrich, designing 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

Computer Science Research Assistant

May 2024–Sept 2025

Provo, Utah

- Led development of GALOPER 2, a MATLAB application to simulate crystal growth and statistically evaluate results, under Prof. Barry Bickmore – 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)

PROFESSIONAL EXPERIENCE

Adobe

Software Engineer Intern

May 2026–August 2026

Lehi, Utah

- Delivered a DORA Metrics dashboard, giving engineering teams data-backed insight into standardized delivery performance
- Constructed Python reporting endpoints for calculation and retrieval of seven distinct metrics, backed by MariaDB, 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

Guardian Sports Medicine & Family Health

Website Developer

June 2026–Present

Lehi, Utah

- Design and deploy a responsive site for a physician-led clinic featuring reusable components, accessible navigation, automated image optimization, SEO metadata, and security headers

PROJECTS

FantasyForge – Full-Stack Web App and Browser Extension

fantasyforge.gg

- Built and deployed a responsive fantasy football platform unifying ESPN and Sleeper leagues with customizable rankings, live scoring, matchup win probabilities, trade analysis, waiver recommendations, and draft tools
- Implemented Supabase authentication, JWT-protected API routes, PostgreSQL row-level security, and AES-256-GCM credential encryption; developed a companion Manifest V3 browser extension synchronizing rosters, league settings, and live draft picks through WebSocket events and REST API polling
- Engineered scoring and projection models combining sportsbook odds, third-party forecasts, and historical player statistics to support league-specific player valuations and lineup recommendations

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 epsilon-greedy exploration

SKILLS

- **Programming 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, Cloudflare Pages, Vercel