

Carson D Price

ML Platform & AI Engineer

@contact@cdprice.dev cdprice.dev Sioux Falls, SD carson-d-price cdprice02

SUMMARY

ML engineer with 4+ years building the systems around models: distributed training on AWS SageMaker and Slurm HPC, 10 TB-scale batch pipelines, and reproducible environments in Nix. Drove agentic-coding adoption (Claude Code, Kiro, MCP) on a federal research team, and builds LLM tooling and local inference on a self-hosted Kubernetes cluster. Looking for ML platform and AI infrastructure work.

TECHNICAL SKILLS

Languages	Python, Rust, SQL, Bash, Nix, TypeScript, C#
LLM & Agents	Claude Code, Kiro, MCP servers, RAG / semantic search, embeddings, Ollama, agent workflows, LLM evals
ML & Statistics	PyTorch, TensorFlow, scikit-learn, NumPy, Pandas; CNNs (U-Net), image segmentation, distributed multi-GPU training, hyperparameter optimization, F1 / IoU / precision-recall, information theory
Infrastructure	AWS (SageMaker, S3, EC2), Azure, Slurm / HPC, Kubernetes (k3s, Helm), Docker, Nix, SOPS, GitHub Actions CI/CD; profiling and benchmarking, property-based testing, REST APIs, .NET, Vue.js

EXPERIENCE

Data Scientist I May 2024 - Present
KBR (contracted to USGS EROS) Sioux Falls, SD

- Run distributed multi-GPU training of CNNs from scratch for national land-cover mapping on Slurm HPC and AWS SageMaker, with batch inference over ~10 TB of imagery (CONUS, AK, HI)
- Own SageMaker experiment infrastructure end to end (distributed training, hyperparameter search, GPU quotas, cost projections); delivered a wildfire modeling effort on budget and schedule
- Designed a U-Net cloud and shadow segmentation model, improving on the prior production method by ~0.05 IoU; brought pinned, reproducible Nix environments to the HPC cluster
- Championed agentic-coding adoption (Claude Code, Kiro, MCP) on the team, and prototyped lode, a robots.txt-compliant, rate-limited scraper that embeds public agency sites into a searchable context store for AI assistants

Program Manager, Capstone Design Aug 2024 - May 2025
South Dakota Mines Rapid City, SD

- Led 5 concurrent engineering teams of 3-4 delivering LLM integrations, full-stack apps, and data pipelines end to end
- Ran architecture and code reviews and mentored engineers through technical design tradeoffs and stakeholder communication

Software Engineer Intern (full-time summers, part-time in school) May 2022 - May 2024
Omnitech Inc. Sioux Falls, SD

- Built and shipped production full-stack applications with .NET and Vue.js on Azure, serving 6 business clients
- Developed backend REST APIs and data access layers powering business intelligence dashboards

OPEN SOURCE & PROJECTS

colony | self-hosted LLM inference, eval-gated classifiers, and an MCP server github.com/cdprice02/colony

- Built an MCP server (~2.2k lines of Python) giving AI agents semantic search over a knowledge base and Google Drive, with OAuth, a nightly embedding indexer, and an audit log
- Gate prompt and model changes on evals (a 144-case labeled bench with pass bars and repeat-stability checks), served by local LLMs on an RTX 3070 alongside a k3s cluster at 69-75 tok/s

turox | Rust chess engine, live on Lichess at ~2000 bullet and blitz github.com/cdprice02/turox

- Optimize the hot path end to end (profile, benchmark against saved baselines, iterate), reaching 52-69M nodes/sec in move generation and ~1.4M/sec in search on a single core
- Prove changes with statistics: SPRT A/B tests over 20k+ self-play games, and 881 tests including ~110 property tests against independent reference implementations, plus fuzzing

nix-atelier | open-source Nix framework for reproducible dev environments github.com/cdprice02/nix-atelier

- 13 semver releases in 3.5 months with a changelog and migration guide; a 4-system CI matrix (x86_64 and aarch64, Linux and macOS) keeps it reproducible, used daily on Linux, macOS, WSL, and HPC

Also | lex, an entropy-based Wordle solver in Rust: solves 98.75% of 2,315 NYT answers in six, averaging 4.05 guesses

EDUCATION

M.S. Computer Science and Engineering, South Dakota Mines (completed while working full time) May 2025 | GPA 4.00

Project: U-Net cloud and shadow segmentation for Landsat imagery, an industry partnership with KBR / USGS EROS

B.S. Computer Science, Mathematics Minor, South Dakota Mines May 2024 | GPA 3.85