Justin Moran

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EDUCATION

Iowa State University **Ames, Iowa**
Bachelor of Science in Computer Science, Minor in Psychology *May 2026*
Relevant Coursework: Data Structures & Algorithms, Machine Learning, Object-Oriented Design, Database Systems, Operating Systems, Networking, Program Analysis

EXPERIENCE

Pippa LLC (Healthtech Startup) **Chicago, IL**
Software Engineer Intern *May 2026 - August 2026*
- Architected and shipped a HIPAA compliant, multi-surface platform (web dashboard, iOS, Android) serving 10K+ daily active users across 200+ outpatient clinics, delivering 229+ requirements in two-week Agile sprints
- Built the clinician dashboard in React, TypeScript, and Next.js with consent-gated, role-based access across patient rosters, care plans, clinical notes, secure messaging, and engagement analytics
- Designed a serverless backend on Cloudflare Workers with AWS DynamoDB, Cognito, and SES, plus an API proxy that keeps computer vision and OpenAI LLM keys off the device and fails over between hosts when networks block a domain
- Developed offline-first patient apps in Swift/SwiftUI and Kotlin/Jetpack Compose, using local persistence and an on-device sync queue so logs reach the cloud reliably over poor networks
- Integrated a custom computer vision model and an OpenAI LLM companion with safety guardrails, running on-device crisis-language checks before any chat text leaves the phone and keeping private journals local-only
- Owned the CI/CD pipeline with path-filtered unit and integration test suites per surface that gate every release

W.R. Berkley Corporation (Fortune 500 Insurer) **Urbandale, Iowa**
Software Engineer Intern *May 2025 - August 2025*
- Saved 4,500+ hours of manual work annually (84+ per week) by building automated ETL data pipelines that replaced manual data entry between systems and eliminated a recurring class of transcription errors
- Integrated internal microservices with policy, claims, and billing systems over REST and GraphQL APIs, keeping underwriting applications consistent with the systems of record
- Engineered features and resolved critical production bugs across the TypeScript front end, GraphQL layer, and SQL database of web applications used daily by underwriting teams
- Shipped through Jenkins CI/CD pipelines on Docker and Kubernetes with QA and DevOps, reviewing teammates' pull requests

Iowa State University, SwAPP Lab **Ames, Iowa**
Research Intern *May 2024 - August 2024*
- Built deep learning models in Python for bidirectional PyTorch and JAX translation, using GPT-3.5 and BERT to automate cross-framework compatibility testing so researchers could port models without rewrites

PROJECTS

Adversarial AI Evaluation Harness (Lockheed Martin) *Python, PyTorch, FastAPI, React, LLMs*
- Owned the evaluation system on a 4-engineer team for a reinforcement learning (PPO) adversary routed by a VQ-VAE transformer classifier, served through a FastAPI inference API with a 2,372-dimension input and 500ms latency budget
- Designed a deterministic 9-dimension grading engine and an LLM analysis layer (Llama 3.1 on Groq) that explains each game, with a React dashboard tracking performance across 5 model checkpoints

AngelWare: Real-Time Search and Rescue Inference (LA Hacks 2026) *Python, C, PyTorch, ESP32, WebSockets*
- Co-built an edge-to-cloud system fusing ESP32 WiFi CSI sensing with computer vision (Detectron2, DensePose, OpenCV), streaming binary WebSocket frames from a Raspberry Pi to real-time GPU inference on RunPod

HerdRight (herdright.com): E-Commerce Marketplace, Acquired December 2025 *React, Node.js, Express, MySQL, Stripe*
- Led a team of 5 to launch a full stack marketplace for 30K+ buyers and sellers with Stripe payments and webhooks, multi-image product listings, and cron jobs refreshing pricing data every 4 hours
- Normalized two catalog types (sires and embryos) into one product schema browsable by category, shipped alongside authentication, cart, seller messaging, review, and seller listing flows

MongoTickets: Real-Time Ticketing Platform *Java, Spring Boot, Kotlin, MySQL, WebSockets*
- Designed a Spring Boot REST API for 5K+ users across web and native Android clients, with JPA/Hibernate transactions and event-driven WebSocket broadcasts that push live inventory and pricing updates
- Modeled accounts, tickets, events, transactions, and price history in MySQL, and shipped on a GitLab CI pipeline that runs on every merge

Querying Program Analysis: LLVM Static Analysis Framework *C++, LLVM/Clang, Python*
- Built an LLVM-based static analysis tool that extracts call graphs and control flow graphs into a cached JSON store for instant queries, reaching 89.7% line coverage on LodePNG's core decompression logic
- Built a CLI query engine answering 4 query types (callers, dependencies, CFG summaries, dead code) on a team of 3

TECHNICAL SKILLS

- **Languages:** TypeScript, JavaScript, Python, Java, SQL, Kotlin, Swift, C, C++, Dart, GraphQL, HTML, CSS
- **Frameworks:** React, Next.js, Node.js, Express, Spring Boot, FastAPI, React Native, SwiftUI, Jetpack Compose, Flutter, JPA/Hibernate, PyTorch, OpenCV
- **Cloud & DevOps:** AWS (DynamoDB, Cognito, SES), Cloudflare Workers, Docker, Kubernetes, Jenkins, GitHub Actions, CI/CD, Git, Linux, serverless
- **Data & APIs:** MySQL, MongoDB, DynamoDB, REST APIs, GraphQL, WebSockets, microservices, ETL pipelines, Stripe API
- **AI & ML:** LLM integration, OpenAI API, prompt engineering, computer vision, deep learning, reinforcement learning evaluation, Claude Code, Cursor
- **Practices:** Agile/Scrum, system design, object-oriented design, unit and integration testing, code review, Jira

AWARDS

1st Place, Ivy College of Business Hackathon (Technical Track, 28 teams) • 2nd Place, ISU CSE Annual Programming Contest