

Xavier Briggs

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EDUCATION

University of Notre Dame | Notre Dame, IN

May 2027

Bachelor of Science in Computer Science and Engineering, ITREDS Scholar — GPA: 3.91

Relevant Coursework: Intro to AI, Data Structures, Operating Systems, Probability, Linear Algebra, Statistics for Data Science, Financial Economics

University of Galway | Galway, Ireland

Jan 2026 – May 2026

Study Abroad — First Class Honours in all coursework

TECHNICAL SKILLS

Languages: Python, TypeScript/JavaScript, Rust, Swift, C/C++, SQL

AI/Agents: Anthropic API/SDK, OpenAI API, Claude Code, Codex, agentic system design, MCP, RAG, prompt engineering, voice agents (Twilio ConversationRelay)

Frameworks/Technologies: React, Next.js, Node.js, SwiftUI/AVKit, PyTorch, scikit-learn, Supabase/Postgres, Firebase, Drizzle ORM, Kalshi & Polymarket APIs

Tools: Git, Linux, Docker, pytest/mypy (strict typing, TDD)

WORK EXPERIENCE

Amazon Prime Video — Apple Player Team | Seattle, WA

May 2026 – Aug 2026

Software Development Engineer Intern (returning)

- Productionizing a tvOS media playback feature prototyped during a prior internship, driving it through release-readiness reviews toward general availability
- Owned end-to-end design and implementation of concurrent multi-player support, architecting player lifecycle coordination across Swift, SwiftUI, and AVKit
- Collaborating across 3 partner teams on release-readiness, accessibility, and certification requirements for a production tvOS feature

Amazon Prime Video — Apple Player Team | Seattle, WA

May 2025 – Aug 2025

Amazon Propel Intern

- Designed and implemented a tvOS media playback feature from scratch across 4 development phases, delivering 10+ merged code reviews with zero regressions and resolving a critical auto-pause defect using delegate and observer patterns in Swift, SwiftUI, and AVKit
- Engineered Team Knowledge Agent infrastructure for Amazon Q CLI, reducing context window usage per prompt from 12% to 5% and achieving full team adoption of automated scripts and AI agents
- Authored developer documentation covering Swift Package Manager setup, symlink-based local development, and platform-specific AVKit constraints, ensuring maintainability for future developers

TLC Manufactured Home Finance Consultants | Remote

2024 – Present

Lead Developer (Freelance, Full-Stack)

- Sole engineer for the company's entire digital presence: designed, built, and operate three production web properties — a borrower site serving ~2,500 monthly visitors, a portal for a 197-dealer network, and an internal CRM used by an 11-person team — on TypeScript, React/Next.js, Firebase, and Supabase/Postgres
- Grew inbound lead volume ~5x (from ~20 to ~100 leads/month) by building the borrower acquisition funnel end to end — landing pages, conversion analytics, and Google Ads integration
- Built and shipped **Iris**, a production voice intake agent on Twilio ConversationRelay and LLM APIs that answers inbound borrower calls, qualifies leads, and hands structured data to the CRM — designed around seven hard invariants (the agent never owns a datastore or controls flow) for auditability and safety
- Architected **Mercury**, a marketing OS on Supabase/Postgres, Drizzle, and a Turborepo/Next.js 15 monorepo, automating campaign and lead-nurture workflows across the dealer network
- Conducted a six-repository cross-cutting architecture assessment and authored the company's architecture and scaling plan; own CI/CD, infrastructure, and ongoing production support

Tweeds — Personal Publishing Platform | South Bend, IN

Jan 2025 – May 2025

Backend Developer

- Built RESTful controllers and routes for the platform's backend, powering AI endpoints on Google Gemini
- Integrated Gemini-driven content analysis and asset generation into the publishing workflow

- Developed a content generation pipeline turning user manuscripts into personalized marketing materials, cutting creator outreach prep from hours to minutes

West Main Pizza | Jefferson City, MO

Jun 2024 – Aug 2024

Social Media Developer

- Increased monthly online marketing revenue by 300% by creating and launching targeted campaigns on Facebook and Popmenu
- Boosted campaign impressions by 1500% through audience targeting and content iteration
- Engineered a Special Events component for the company website in JavaScript and React.js, lifting event attendance 15% and site engagement 10%

PROJECTS

FORTUNA — Autonomous Prediction Market Trading Platform

Python, Rust, Postgres, Anthropic API, Kalshi API

- Designed a three-system architecture with hard seams — Alexandria (incorruptible data witness), Pythia (belief formation), FORTUNA (judging and execution) — where no system grades its own output
- Built an autonomous trading platform for prediction markets (Kalshi) with a maker-checker architecture, an append-only belief ledger, and seven regulatory-inspired invariants enforced in code
- Implemented a staged capital-ramp system (shadow → paper → live) gated on process metrics — CLV, Brier score, CRPS — rather than realized PnL, evaluating 3,400+ shadow-mode trade intents through GO/NO-GO gates with a full audit trail
- Built **Pythia**, an LLM-powered belief factory forming calibrated probabilities via a five-stage pipeline (base-rate priors, triage, evidence-gathering analyst, judgment resampling, mechanical verification); every path fails closed and every fetch is logged with URL, timestamp, and content hash for leak-proof, auditable beliefs
- Built **Alexandria**, a fully decoupled research data platform with bitemporal storage and a medallion architecture enabling point-in-time reconstruction of every trading decision; operate the platform via ROTA, a custom operator dashboard

Aeolus — Probabilistic Weather Forecasting API

Python, GEFS ensemble data, EMOS calibration

- Built and commercially launched a 26-station probabilistic weather forecasting API, issuing 20,000+ calibrated forecasts by applying EMOS statistical calibration to GEFS ensemble output; conducted B2B outreach to parametric insurance firms (Swiss Re ART, Descartes)
- Automated the daily forecast pipeline end to end, sustaining 99.8%+ success across 9,100+ GEFS ensemble runs (~16s per run) with fully unattended operation
- Improved forecast skill 45% (CRPS 2.25 → 1.23) through iterative recalibration, and identified and fixed a lead-hour observation bug via a shadow-mode closing-line-value diagnostic before any live deployment

Story Coder SABRAI

Flutter, OpenAI API, Prompt Engineering

- Improved automated classification accuracy from 88% to 96% on SABR coding of teacher read-aloud transcripts through few-shot and Chain-of-Thought prompting, RAG, and temperature tuning
- Delivered a cross-platform Flutter proof-of-concept with a Flask backend, enabling education researchers to run automated transcript coding without manual review

Madness Predictor

Python, PyTorch, scikit-learn

- Developed a PyTorch neural network predicting NCAA March Madness winners with round-by-round win probabilities, achieving 70% accuracy on held-out test data
- Validated the model on the live 2025 tournament, scoring 69.8% correct picks against the actual bracket

LEADERSHIP & PROGRAMS

ColorStack at Notre Dame

Jun 2024 – Present

President (Jun 2026 – Present); Vice President (Jun 2024 – Jun 2026)

- Lead a 25-member chapter for underrepresented CS students as President, setting strategy and directing the executive board
- Run 5 events per semester spanning professional development, recruiting prep, and community programming
- Built the Buddy System mentorship program as VP, reaching 50%+ member adoption, and managed the chapter budget

CS4Good | Notre Dame, IN

May 2025 – Present

Treasurer (Jun 2026 – Present); President (May 2025 – Jun 2026)

- Led the organization as President through the completion of 8 community projects across the county, building software for assistive schools for the disabled, community centers, and nonprofits
- Manage organization finances and project budgets as Treasurer

Management Leadership for Tomorrow

Jan 2025 – Present

Career Prep Fellow

- Selected into an 18-month professional development program for high-achieving diverse talent, with case studies and conferences hosted by Deloitte, LinkedIn, and Target

AI4All Ignite

May 2025 – Dec 2025

Changemaker

- Built an end-to-end deepfake speech detector (Whisper transcription, BERT embeddings, feedforward NN), reaching 81.5% test accuracy and 0.703 recall on fakes across 31,699 transcripts
- Selected as 1 of 40+ teams to present at the AI4ALL Ignite recruiter symposium