

Neilson Taylor

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Education

University of Texas at Austin

Austin, TX

Bachelor of Science in Physics

Expected December 2026

- **Relevant Coursework:** Mechanics, Electromagnetism, Quantum Mechanics, Electronics, Multi-Variable Calculus, Linear Algebra, Differential Equations, Data Structures & Algorithm

Technical Skills

Languages: Python, C++, Java, JavaScript, TypeScript, SQL

Scientific & ML: MATLAB, Geant4, ROOT, NumPy, SciPy, Pandas, Matplotlib, TensorFlow

Web & Frameworks: React, Next.js, Node.js, Express, Flask, Tailwind CSS, Supabase, PostgreSQL, MongoDB

Tools & Platforms: Git, Linux, Docker, AWS, Vercel, Socket.io, Model Context Protocol(MCP), RAG

Concepts: Monte Carlo Simulation, Signal Processing, FEM, Image Processing, Data Analysis

Experience

Full-Stack Developer

Sep. 2025 – Mar. 2026

KVRX Radio — University of Texas at Austin

Austin, TX

- Maintain and improve station website serving 50,000+ weekly visitors using React and Node.js
- Lead feature development with a student engineering team, shipping 3+ new features per semester
- Reduced page load time by refactoring legacy components and optimizing API call structure

Physics Peer Mentor

Oct. 2025 – Present

University of Texas at Austin

Austin, TX

- Tutor undergraduate students in Mechanics, Electromagnetism, and Mathematical Methods
- Provide weekly office hours for questions, problem-solving and lab work
- Develop Python-based computational exercises to reinforce Numerical Methods concepts

Undergraduate Research — PET Detector Simulation

UT Austin Physics Dept.

Geant4, ROOT, Python, Monte Carlo

Austin, TX

- Developed Geant4 Monte Carlo simulations for PET scintillator detectors, modeling photon transport and energy deposition across varied geometries
- Analyzed timing and energy resolution using ROOT and Python, achieving sub-nanosecond coincidence timing resolution critical for clinical imaging accuracy
- Iterated on detector geometry configurations to optimize photon detection efficiency by ~15% over baseline design

Projects

CareerLaunch | Next.js, TypeScript, Supabase, Stripe, Tailwind CSS, Vercel

[Live Demo](#)

- Built an AI-powered job application platform with smart profile extraction, Kanban job tracker, and a Chrome extension for one-click form auto-filling and AI-generated cover letters
- Integrated Stripe subscription billing with free trials; implemented Supabase Auth with Row Level Security for secure multi-tenant data isolation
- Architected full-stack app using Next.js App Router with server components, React Query, and Zustand; deployed on Vercel with CI/CD

CampusCart | Next.js, TypeScript, Supabase, Tailwind CSS, Vercel

[Live Demo](#)

- Built a hyperlocal student marketplace for UT Austin enabling peer-to-peer buying/selling restricted to @utexas.edu users via Supabase Auth with Row Level Security policies
- Engineered listings management, real-time search/filtering, in-app messaging, and user profiles using Next.js 14 App Router and server components
- Deployed to Vercel with CI/CD; designed PostgreSQL schema with RLS for multi-tenant data isolation

MystiQ City | React, Vite, Express.js, Socket.io, C++, Java

[Live Demo](#)

- Developed a full-stack interactive city exploration game with 6 districts, dynamic NPC dialogue, quest system, and mini-games using React 18 and Express.js
- Implemented real-time multiplayer via WebSocket with server-side security (Helmet.js, CORS, rate limiting, CSP)
- Architected modular component system with C++ and Java backend services; deployed on Vercel and Railway

Portfolio Website | HTML, CSS, JavaScript, GitHub Pages

[Live Site](#)

- Designed a responsive personal portfolio with smooth animations, interactive project modals, mobile-first layout, SEO optimization, and contact form with validation

Certifications / Awards

2026 McCombs Entrepreneur Summer Fellowship — McCombs School of Business, UT Austin
Bloomberg Market Concepts (BMC)

Apr. 2026