Cole M. Puls

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Portfolio Site: http://bit.ly/44JDnHC

EDUCATION

University of Missouri - Columbia, MO
***B.S in Computer Science**, Expected May 2027*
Concentrations: Artificial Intelligence, Software Development, and Machine Learning
Relevant Coursework: Data Structures & Algorithms, Object-Oriented Design, Neural Networks, Databases

EXPERIENCE

Undergraduate Research Assistant - *AI/ML and Mobile Sensing Research*
Kotlin Multiplatform, SwiftUI, AI/ML Research | June 2025 - Present

- Built **iOS mobile sensing app** for collecting **passive sensor data** (accelerometer, gyroscope, behavior patterns).
- Designed **real-time data pipeline** for training **AI models**
- Implemented **secure auth** and **background uploads** for **longitudinal ML studies**

Software Engineering Intern - *The Sunrise State (Remote/Unpaid)*
Next.js, Tailwind CSS, Sanity, TypeScript, Supabase | May 2025 - Present

- Integrated **headless CMS** using **Sanity Studio** and **Content Lake APIs**
- Built **newsletter + auth system** with **Auth.js**, **Resend**, **Supabase**
- Collaborated using **Vercel**, **GitHub**, and **Plane.so**

PROJECTS

Foreman Logging App - *Langford Mechanical & Sheet Metal, INC.*
React Native, Expo, Firebase, Node.js| May 2025 - July 2025

- Developed **cross-platform mobile app** for foremen to **log job activities**, **hours**, and **photos**
- Used **Firebase Auth + Firestore** for **real-time data sync**
- Built **REST API** (Express.js, Multer, Nodemailer) with **secure image upload** and **automated email delivery**

Dream Keeper - *AI-Powered Mobile Dream Journaling App*
React Native, Expo, Node.js, Google Gemini API | Mar 2025 - Present

- Created **AI-enhanced mobile app** for dream journaling with **Gemini-powered mood analysis** and chat
- Implemented **speech-to-text**, **animated UI**, and **gesture-based navigation**
- Built backend with **Express.js**, **async storage**, and **interactive charts**

ACTIVITIES AND LEADERSHIP

Diabetes Risk Classifier - *Mizzou Hackathon 2025*
Python, PyTorch, CLI App | Feb 2025

- Built a **multi-layer neural network** with **dropout** for **binary classification** of clinical diabetes risk
- **Preprocessed real patient data** (normalization, imputation), boosting model accuracy by **18%**
- Designed **CLI interface** with **probability scores** and **model interpretability** options
- **Led a 3-person tea**m, delegating tasks and delivering a full ML pipeline in **under 72 hours**

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java, C, C++
Frameworks/Libraries: React, React Native, Express, PyTorch
Tools/Platforms: Git, Firebase, Supabase, Vercel, Sanity, Expo, Render