

# Collin Brennan

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## EDUCATION

**Western Governors University**, Salt Lake City, UT

2024

- *BS in Cybersecurity*
- *Awards: Excellence in Communicating with Others & Legal Issues in Cybersecurity*

## TECHNICAL SKILLS

- Languages: Python, JavaScript, Dart
- Frontend: Vue.js, Flutter, Tailwind CSS, HTML
- Backend Skills: Flask, REST APIs
- ML/AI: PyTorch/Keras Model Inference
- Tools & Platforms: AWS (Aurora, S3, RDS) Exposure, Firebase, Git

## WORK EXPERIENCE

**Edge Forestry**, *Software Engineer*, Grand Rapids, MI

May 2025 - Present

- Owned end-to-end development of a Vue.js web application, from initial system design and component architecture to state management, backend PyTorch model inference, and backend API integration.
- Designed and Implemented backend API workflows to securely communicate with AWS from frontend requests.
- Implemented a secure data access layer using JWT authentication and Pinia store state management to securely serve frontend data requests from our AWS S3 bucket.
- Modularized backend architecture into modular, navigable components, improving codebase clarity and reducing development navigation by 50%+.
- Refactored model inference from Keras to support PyTorch models, resulting in a 5% improvement in prediction accuracy and confidence (90 to 95%).
- Designed and implemented comprehensive unit, integration, and end-to-end tests, improving system reliability and catching regressions before production.

## PROJECT EXPERIENCE

**Offline Tree Disease Diagnosis**, *Mobile App and Device*

- Engineered an offline machine-learning disease detection device for client environments.
- Developed a Flutter application integrating automated USB data extraction and Rasp-Pi PyTorch image inference.
- Estimated to accelerate forest inspection and land treatment workflows by 75%.

**PhysioLens**, *Health and Wellness Aggregation Web App*

- Uses statistical analysis to aggregate multiple datasets and weight their effects on recovery.
- Backend uses FastAPI framework and frontend is built using Nuxt3.

**Cinematch**, *Movie Discovery Platform*

- Built a platform for personalized movie discovery, recommendations, and content curation on user preferences.
- Integrated the use of TMDb's API to fetch and display movie data.

## LEADERSHIP EXPERIENCE

**Varsity High School Lacrosse Coach**, Haslett, MI

Jun 2022 - Aug 2024

*Attack Positional Coach* (Jun 2022 - Aug 2024)

- Produced the first offensive All-American in school history.
- Responsible for in-game subbing, player personnel, and attack positional development.

*Offensive Coordinator* (Jun 2023 - Aug 2024)

- Directed strategic planning and development of 40+ student athletes, resulting in a top-10 statewide finish.
- Drove offensive system design that produced the highest scoring offense in school history.