Robert Greathouse

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Skills

Python, Java, C++, HTML, React, JavaScript, CSS, SQL, scikit-learn, Pandas, Git, GitHub Actions, Docker, REST APIs, AI Development, Claude Code, Cross-functional Collaboration, Technical Presentation, Mentorship

Education

Brigham Young University **Summer 2026**
BS, Computer Science: Machine Learning Emphasis *Provo, UT*

- GPA: 3.9
- Relevant Coursework: Database Modeling, Machine/Deep Learning, Adv. Software Construction, Statistics, Algorithm Design & Optimization, Discrete Mathematics, Agentic Tooling/Systems

Experience

Brigham Young University **January 2023–Present**
Course Developer | January 2024–Present | Dr. Gordon Bean *Provo, UT*

- Reduce course development time by ~80% through an open-source Python library (MDXCanvas), enabling Canvas LMS content generation via XML
- Create and maintain CI/CD pipelines via GitHub Actions, streamlining rapid iteration through automated Docker builds, Canvas deployments, and webhook notifications
- Coordinate between faculty and TAs across 4+ courses, translating feature requests into actionable issues, and driving prioritization through GitHub Projects

Machine Learning Research Assistant | April 2025–December 2025 | IDeA Lab *Provo, UT*

- Built end-to-end ML pipeline—web scraping, validation, feature engineering, model evaluation—processing 10,000+ events across 9 MLB seasons to predict stolen base outcomes
- Engineered 15+ features from Baseball Savant data; evaluated Logistic Regression, Random Forest, and XGBoost—selected logistic regression (72% accuracy) for superior interpretability on imbalanced data
- Collaborated with Texas Rangers R&D through iterative model reviews, translating feedback into model refinements; co-authored paper submitted to MIT Sloan Sports Analytics Conference

Teaching Assistant | January 2023–April 2024 | Dr. Gordon Bean *Provo, UT*

- Maintained public-facing course website built with React and MDX, prioritizing accessibility and student navigation through codebase refactoring and UI improvements
- Developed coding guides and taught programming fundamentals to 40+ students, building confidence through mentorship on debugging and problem-solving strategies

Projects

MDXCanvas | A Canvas LMS Tool | Repo **January 2024–Present**

- Publishing an open-source Python CLI to PyPI with semantic versioning, enabling scalable Canvas LMS content generation—quizzes, assignments, pages, and full course structures—via REST API
- Architecting modular tag system, supporting reusable content components and dynamic Jinja templating for flexible course configuration
- Authoring comprehensive technical documentation covering installation, configuration, and template syntax; adopted by multiple BYU faculty teams

GitHub Dashboard | Agentic GitHub Manager | Repo **October 2025–December 2025**

- Reduce status checks from minutes to seconds through a unified dashboard aggregating PRs/issues across 20+ repos via GitHub REST API and OpenAI automation

A Game-Theoretical Model of Pickoffs and Stolen Bases | Research Paper | Paper **April 2025–March 2026**