Michael C. Eaton

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Work experience

Teaching Assistant - Rich Media Web Development **Jan '26 - Present**

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- Provide **technical mentorship** for undergraduate students, utilizing advanced **debugging techniques** to resolve complex logic errors and unblock student progress during development cycles
- Enforce industry-standard engineering practices during **code reviews**, emphasizing proper version control (Git) workflows, modular architecture, and **clean code principles** to prepare students for professional roles

AI Trainer - Coding Expert **Oct '25 - Present**

Confidential | REMOTE

- Performed technical quality assurance on complex programming datasets in **Python** and **Java** to ensure code functionality and adherence to industry best practice
- Evaluated large-scale model outputs for logical consistency and multi-step reasoning, providing detailed feedback to improve algorithmic accuracy
- Developed high-precision benchmark data used for model alignment and fine-tuning, ensuring the delivery of high-quality training sets for specialized domains

Developer - Sector Down **Aug '24 - Dec '24**

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- Developed backend services and automation tools for a networked simulation game using **Unity** and **C#**
- Refactored and documented codebase, ensuring reliability and maintainability for future engineers
- Collaborated with clients to meet specs through iterative testing and debugging

Development Team Lead - Peaceland **May '24 - Dec '24**

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- Spearheaded design and development of the Peaceland video game from conceptualization to prototype in **Unity**
- Directed the implementation of game mechanics and oversaw the work of **20 other developers**, resulting in an organized and efficient team structure
- Developed a full stack web presence to raise the project's visibility and showcase the team's work using **React** and **Strapi CMS**

Education

Data Science | Masters of Science **Aug '25 - Present**

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- **GPA:** 4.0
- **Relevant Coursework:** Applied Statistics, Machine Learning, Simulation Optimization, Database Systems, Digital Twins (Capstone).

Game Design and Development | Bachelors of Science **Aug '22 - Dec '24**

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- **Awards:** Dean's List (All Semesters 2022–2024)
- **Relevant Coursework:** Data Structures & Algorithms, Artificial Intelligence, Database Management.

Skills

- **Languages/Frameworks:** Python, SQL (PostgreSQL, MySQL, MongoDB), JavaScript, C#, Java
- **Tools:** PowerBI, Excel, FastAPI, React, Express.js, Unity, Git, AWS, Azure, GitHub
- **Data/Monitoring:** Database Design, Data consistency, ETL pipelines, API development

Projects

Analysis of Deep Reinforcement Learning in Stochastic Job Scheduling **Dec '25 - Present**

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- Engineered a high-fidelity Unity3D **Digital Twin** to simulate stochastic industrial environments
- Benchmarked **Deep Reinforcement Learning (DRL)** against traditional meta-heuristics for real-time resource allocation
- Conducted rigorous **statistical analysis** of model robustness using **Python** and **C#**
- Identified critical performance thresholds where DRL agents outperformed traditional optimization in throughput and system recovery

Resource Allocation & Production Optimizer **Sep '25 - Present**

- Formulated a **Linear Programming (LP)** model to solve complex resource allocation problems
- Engineered and deployed a **full-stack web application** that interfaces with the optimization engine, allowing users to define production targets and receive mathematically optimal factory schemas

Diabetic Patient Readmission Modeling **Oct '25 - Dec '25**

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- Designed and implemented an end-to-end machine learning pipeline to predict 30-day hospital readmission
- Handled data imbalance, **feature engineering**, and group-aware **cross-validation** to prevent patient leakage
- Evaluated models using clinically relevant metrics and **cost-based thresholding** modeling how changing real world costs drive model predictions