

Jason Merrone

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Technical Projects

- **IDEA Survey Qualitative Analysis Tool**
 - Web app enabling professors to generate summaries and visualizations of course evaluation data.
 - Utilizes Meta Llama 3.2 (3B Instruct) language model with custom LoRAs created via knowledge distillation from Google Gemma 27B.
 - Hosted on a Flask backend using the Transformers library, supporting dynamic task execution via LoRa swapping.
- **Virtual Machine**
 - Virtual computer from scratch in Kotlin with a 500Hz CPU, 16 instructions, and 4KB of RAM.
 - Implemented OOP design patterns such as Singleton, Strategy, and Factory.
 - Includes a custom Tic-Tac-Toe ROM compiled from hexadecimal machine code.
- **CatConnect**
 - Developed a full-stack CRUD application using React (Vite) and Django frameworks.
 - Integrated a custom-trained CNN for binary classification of cat images using a custom dataset.
 - Enabled user functionality such as account creation, profile management, posts, and likes.

Educational Background

Utah State University - Bachelor of Science in Computer Science, Minor in Mathematics, Expected Graduation 2025. Cumulative GPA: 3.4/4.0.

Professional Experience

- **Capital Fuels** - Operations Support Technician, Summer 2023. Enhanced customer transaction systems, optimized equipment diagnostics, and streamlined loyalty program registration through SQL and ASP.NET solutions.
- **KSL Broadcast Group** - Engineering Intern, Oct 2021 - Apr 2022. Specialized in electronic repairs, system programming, and 3D design, contributing to technological improvements and operational efficiency.

Core Competencies

- **Programming:** Python, Java, Kotlin, C++.
- **Web Development:** Springboot, React, Django, Flask
- **Machine Learning:** PyTorch, Pandas, Scikit-learn, Jupyter
- **Other skills:** Collaboration, problem-solving, self-starter