Brianna Epstein

bdepst@umich.edu | bribri.dev

EDUCATION

University of Michigan – Ann Arbor April 2022
Bachelor of Science in Engineering in Computer Science GPA: 3.61/4.00
Minor in Asian Languages and Cultures (Japanese focus)

- Relevant Coursework: Computer Organization, Computer Security, Web Systems, Foundations of Computer Science, Computer Vision, Software Engineering, Computer Game Design and Development, Machine Learning
- Four-time Dean's Honor List and Three-time University Honors
- Instructional Aide for Computer Game Design and Development
- President of Animania: The Japanese Animation Film Society

PROJECTS

WolverineSoft Studio - Game Development Programmer May 2021 – April 2022

- Developed, with team, games "Rideshare Rampage" in Unreal Engine, as well as "Bloom: Roots of Renewal" and "Twin Blades' Vengeance" in Unity
- Implemented AI for traffic and pedestrians to continue along paths, and to recover and respond appropriately in multiple scenarios and in response to actions taken by the player
- Cooperated with design team and implemented various mechanics relating to progression and combat to allow for new types of variety and challenges in gameplay

Research Assistant @ Situated Language and Embodied Dialogue (SLED) Lab May 2020 – April 2022

- Acknowledgments: 1, 2
- Generated ground truth data for evaluation of natural language processing models' physical reasoning when provided physically plausible or implausible stories
- Analyzed dataset for measurement of physical state properties and types of conflicts to evaluate and explain model predictions
- Collected human performance data as a benchmark to create a new dataset for evaluating various models' performance in navigating an environment when given natural (human) language instructions
- Explored, with research group, potential improved metrics to reward agents for accurate intermediate decisions even when the correct final goal is not necessarily reached
- Assisted with generation and improvement of progressive dataset, which contains shorter instructions and gauges models' abilities to recognize landmarks along a path

Manga Colorization Using Machine Learning March 2020 – April 2020

- Implemented, with partner, Conditional Generative Adversarial Network (cGAN) architecture to color in the black and white pages of a comic
- Utilized screentone removal and image segmentation to clean original black and white images and prepare them for colorization while preserving important features
- Applied post-processing techniques, such as quantization, to improve the quality of output images

Scalable Search Engine November 2019 – December 2019

- Collaborated with team on end-to-end search engine similar in behavior to commercial search engine
- Implemented indexing with map and reduce tasks to allow for parallel data processing and the use of large datasets
- Applied information retrieval concepts, such as the PageRank search algorithm, to display relevant search results on a graphical user interface

SKILLS

- Computer: C/C++, C#, Python, Java, JavaScript, HTML, Git, Unity, Unreal Engine
- Languages: Limited working proficiency in Spanish and Japanese