## CHANG ZENG

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## Education

Computer Science - Master of Science - 2024 University of Massachusetts Amherst - Amherst, MA

Computer Science - Bachelor of Science - 2022 University of Massachusetts Amherst - Amherst, MA

## Experience

Backend Developer - January, 2022 to Present

Wuhuu website development - Online

- Looked over project specifications and came up with solutions that could be used on multiple websites.
- Used server-side logic to integrate user-facing elements created by front-end developers.
- Developed security and data protection applications to secure assets.
- Constructed unit tests to analyze and debug new features to meet expectations.
- Simplified the code complexity to improve the readability and availability for debugging.

Lead Developer - April, 2022 to Present

Game Simulator - Online

- Created a launcher to check and update the simulator.
- Constructed a server-client system to control the simulator.
- Implemented a multi-agent system that reacts to the player's action.

Team Leader - January, 2022 to May, 2022

Eye Activity Tracking - Amherst, Massachusetts

- Built the application to make critical predictions about current user status, such as idling or studying.
- Concluded and analyzed different eye features and proved the correctness of selecting those features for the model.
- Incorporated different linear and logistic classifiers as random forests to mitigate both overfit and underfit problems.
- Used stratified k-fold, train-validation-test, and majority voting mechanism to improve the machine learning model performance.

Algorithm Researcher - September, 2021 to December, 2021

NLP Emoji Translator - Amherst, Massachusetts

- Implemented a data collecting and shuffling system for labeling.
- · Calculated and improved multiple gradient or subgradient functions to improve the time and space complexity for the training process.
- Combined and Fine-tuned different transformers and neural networks to improve the performance of the final model.

Team Leader - September, 2021 to December, 2021

**Board Game Engine Design** - Amherst, Massachusetts

- Generalized and reworked a card game engine into a board game engine.
- Implemented new work processes that resulted in continued progress.
- Coordinated weekly meetings for internal and external groups, including face-to-face and zoom interactions.

## Skills

• C, C#, C++, Java, JavaScript, Python

· Postgresql, MySQL, SQL server

Windows, MAC OS, Unix/Linux

· Git, Amazon Web Services, Visual Studio, Unity